ALASKA MEDICINE

Volume 27, Number 1
January/February/March 1985

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ALASKA MEDICINE

Official Journal of the Alaska State Medical Association

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ORIGINAL ARTICLES:

Malignant Hyperthermia
David K. Faust, M.D. 1

Recurrent Ameloblastoma: Case Report
Donald G. Chiles, DDS, David D. Beal, M.D., Carl Beck, M.D. 3

What's New In Neurosurgery in the 1980's
Richard M. Lehman, M.D. 6

FEATURES:

Alaska Medicine Essay: Medicine — In Trouble
Milo Fritz, M.D. 9

Annual Meeting of The Alaska State Medical Society, Haines, Alaska
David A. McGuire, M.D. 11

History of Medicine In Alaska: Don't Take It Away
Sandra Lee Wolf 12

Letter to the Editor 13

Auxiliary News
Lorrie Horning 16

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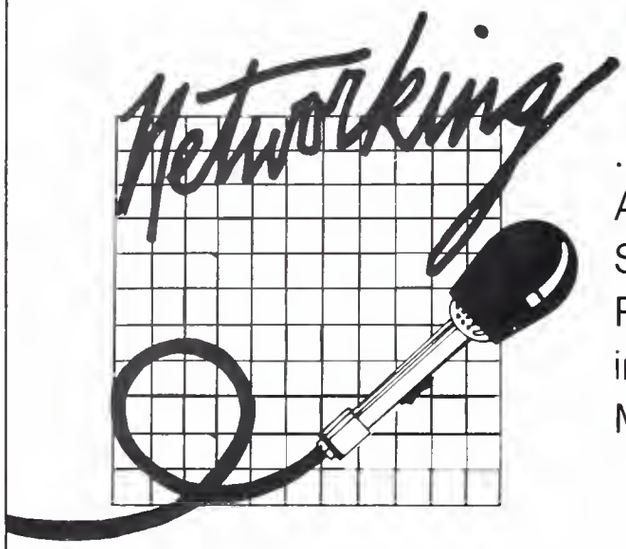

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MALIGNANT HYPERTHERMIA

David K. Faust, MD

Malignant hyperthermia is one of the most feared complications encountered by the anesthesiologist, surgeon, and other physicians caring for patients in the perioperative period. Better understanding of the physiology involved and the recent introduction of Dantrolene, a drug effective in reversing the hypermetabolic process of malignant hyperthermia (MH), have greatly reduced the mortality rate of patients suffering from the syndrome.

The incidence of malignant hyperthermia is approximatedly one in 50,000 anesthetized adults, one in 15,000 anesthetized children, and one in 2500 patients anesthetized for strabismus surgery (5,6). The disease is transmitted by a single autosomal dominant gene, thereby affecting 50% of offspring. Reduced penetrance and variable expressivity also characterize its genetic transmission. One-third of the cases occur in the second or subsequent anesthetics, and the syndrome commonly does not declare itself until after the patient reaches the recovery room. Ages of patients affected by MH reported in the literature range from two months to 78 years. Stress, exercise, local anesthetics of the amide type, muscle relaxants, and most potent general anesthetic agents have been associated with the syndrome.

In a minority of patients, MH has been associated with recognizable musculo-skeletal abnormalities such as strabismus, ptosis, myotonic dystrophies, kyphoscoliosis, central core disease, and marfanoid syndromes (5). It is possible that in susceptible patients the sarcoplasmic reticulum does not function normally in the reuptake of calcium. This causes the myoplasmic calcium to rise and thereby activates phosphorylase kinase and myosin ATPase, stimulating glycolysis and producing phosphate and heat. Also, troponin is inhibited by the high myoplasmic calcium levels causing muscle contracture. Secondarily, mitochondria take up the excessively high calcium and uncoupling of oxidative phosphorylation occurs. Aerobic and anaerobic metabolism both increase. The resultant lack of ATP due to the imbalance between production utilization and the increased sarcolemmal calcium levels lead to membrane instability and the leakage of intracellular contents. There may be many common pathways that lead to the increase in calcium (6). Indeed, the heterogenicity of muscle disorders associated with MH suggests that there is more than one way to elevate myoplasmic calcium (3).

Prompt recognition and treatment of the syndrome is important in maximizing the patient's chances for survival. For example, succinylcholine, a muscle-relaxant commonly used early in an anesthetic to facilitate intubation, is well known to be associated with MH. If rigidity of the masseter muscles occurs after the administration of succinylcholine (making laryngoscopy difficult), a presumptive diagnosis of MH must be made, the anesthetic must be stopped, and the physician must prepare to handle the syndrome. The most consistent early sign of MH is a tachycardia. Obviously, there are many more common causes for tachycardia other than MH (light anesthesia, shock, etc.), however; this sign must be explained. The tachycardia of MH is often associated with arrhythmias secondary to increased serum potassium, tachypnea, and dark blood in the surgical field. The tachycardia and tachypnea are due to the intense metabolic and respiratory acidosis. The cyanosis is due to increased oxygen extraction due to the hypermetabolic state. Rigidity may or may not be present. Fever is a late sign. Laboratory tests will demonstrate the respiratory and metabolic acidosis, hypoxemia, myoglobinemia, and high serum potassium, magnesium, lactate, pyruvate, and CPK levels. Initially, the calcium will rise, later it will fall precipitously (6).

The first step in the approach to the situation is to discontinue any anesthetic agents (it must be

remembered that the susceptible patient is at risk for forty-eight hours post-op). The patient should be hyperventilated with 100% oxygen — this will correct the hypoxemia, but hyperventilation is often unsuccessful in reducing the pC02, which is often 100-200 torr initially. Sodium bicarbonate should be administered to raise the pH and thus help drive potassium back into the intracellular space. Cooling should begin with surface cooling, iced IV fluids, and lavage of the stomach, bladder, rectum, peritoneal cavities, and thorax. The urine output should be maintained at 2cc/kg/hr with mannitol and lasix to prevent the myoglobinemia from causing renal failure. Because the metabolic demands can be ten times normal the cerebral metabolic substrates can be quickly depleted, thus 20% Dextrose and insulin should be administered (6,7).

Procainamide is a valuable drug for use in treating ventricular arrhythmias in the MH patient. It has been noted on occasion that the signs of MH have ceased after the administration of procainamide. Procainamide releases procaine in the body. Procaine increases calcium transfer from the sarcolemma of muscle cells into the sarcoplasmic reticulum. This property is also true of other ester local anesthetics. Local anesthetics of the amide type inhibit calcium transfer and are associated with MH (6).

Dantrolene sodium is a hydantoin derivative that has been shown to be invaluable for stopping the MH syndrome. In skeletal muscle, dantrolene dissociates the excitation — contraction coupling, probably by interfering with the release of calcium from the sarcoplasmic reticulum. Unlike procainamide, dantrolene can be effective in stopping the MH syndrome after it is full blown. It is also effective prophylactically for MH patients who must undergo surgery. When faced with an MH emergency, the initial dose of dantrolene should be 2.5 mg/kg IV. Additional dosages should be administered until the syndrome ends — 10 mg/kg have been used. After an episode of MH has subsided, the patient should receive a total dose of 4 mg/kg/day for two days (7).

Late complications of an MH episode include consumption coagulopathy, acute renal failure, inadvertent hypothermia due to vigorous cooling leading to arrhythmias, pulmonary edema (usually post cardiac arrest), and neurologic sequelae such as paraplegia and decerebration (6).

Successful anesthetics can be administered to susceptible patients by using neuroleptanalgesia, barbiturates, nitrous oxide, narcotics, pavulon, ketamine, or blocks with ester local anesthetics. Such patients should receive 4-8 mg/kg/day of dantrolene PO for one to two days preoperatively, with the last dose 3-4 hours preoperatively. This dosage is associated with skeletal muscle weakness and sedation. The dosage should be adjusted to prevent incapacitation (3).

It should be remembered that preoperative CPK's are not diagnostic for MH patients. One-third of MH patients have normal CPK's, and CPK's can be elevated by such things as muscle injury and exercise. The caffeine contraction test appears to be the most accurate method of evaluating possible MH victims. Excised muscle is placed in a suitable organ bath and the tension of the muscle is recorded as increasing concentrations of caffeine are added — the MH susceptible patient will demonstrate an unusually high tension in response to the caffeine.

The mortality rate of an episode of MH treated aggressively before the introduction of Dantrolene was in the 65-70% range. Nowadays, with the heightened awareness of the syndrome and the availability of Dantrolene, the mortality rate runs about 10-20% (4). The key to patient survival in an MH crisis is prompt diagnosis and immediate aggressive treatment.

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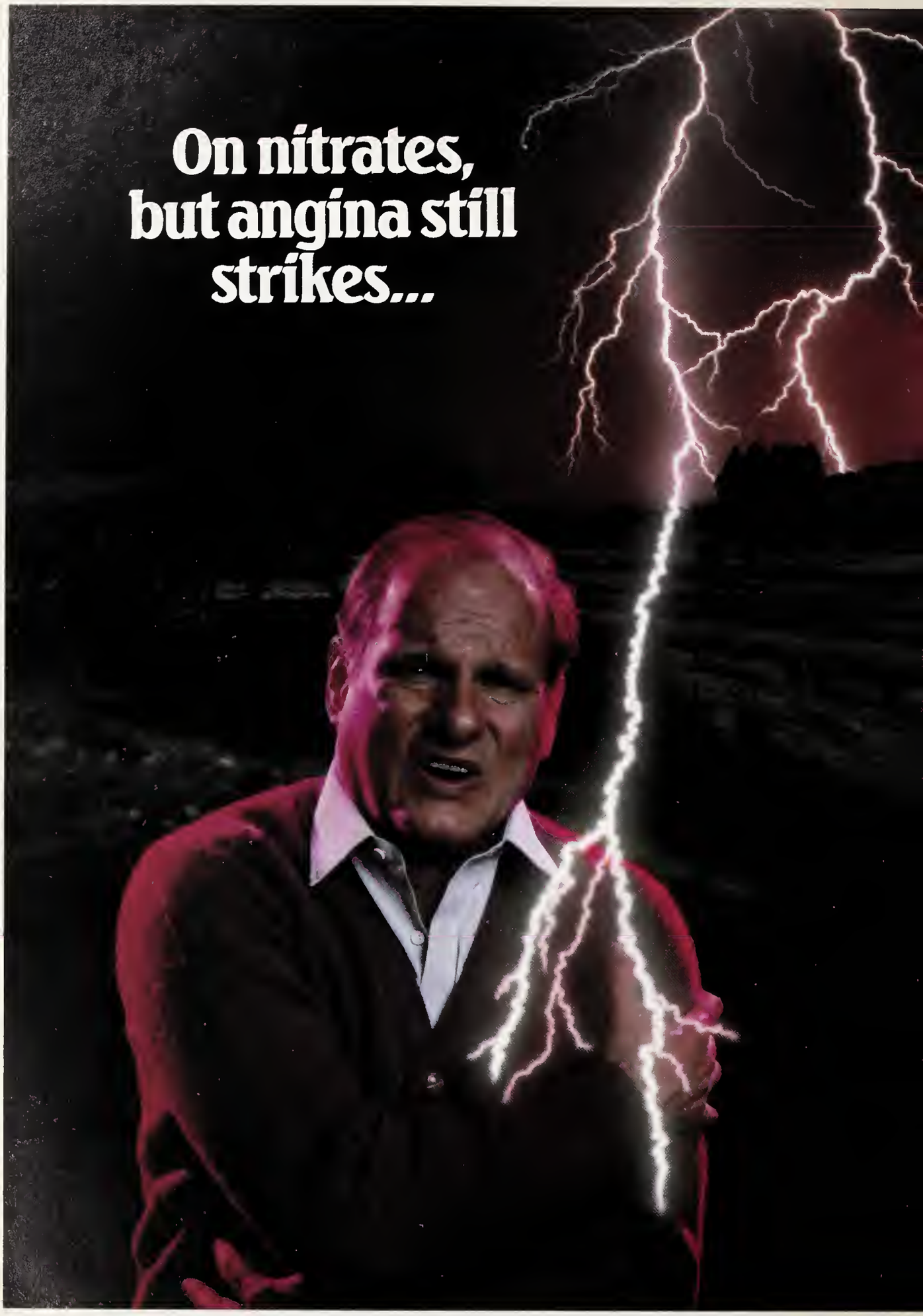
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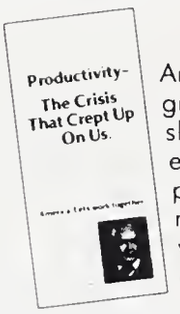

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ANNUAL MEETING OF THE ALASKA STATE MEDICAL SOCIETY
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The annual meeting of the Alaska State Medical Society will be held June 5-9 in Haines, Alaska. Dr. Stanley Jones has kindly consented to be the host for this year's convention.

Haines is clearly a historic city with early ties to Skagway and the Yukon Gold Rush. White Pass and the Yukon Railroad are nearby. Haines also serves as the northern terminus for the Ferry system in Southeast Alaska. Dr. Jones has put together a number of recreational opportunities, including a visit to Chilkoot Pass Trail, local sightseeing, fishing, hiking, etc.

The Convention committee has been working diligently to present a broad spectrum of speakers on several topics for the convention. The private practice of medicine is certainly beset with change. These changes will be of great importance to all of us in the future. We intend to have speakers who represent both National and State governments to give their views on changes in medicine. While the changes in medicine wrought by the government and other agencies are important, the basic information that allows us to practice as professionals is also important. We are attempting to maintain a balance between the two.

Dr. Ken Cooper, who is well-known for his work on sports medicine and sports medicine physiology, has kindly consented to join us for the meeting. Both he and his wife are accomplished public speakers. Their presentation should be of great interest to anyone who deals with athletes or may have athletic inclinations.

Dr. Bob Britton from Colorado, is an expert on medical malpractice. Many of you may have heard him speak. He will be with us to discuss the malpractice scene from the physician's point of view as well as give us some very eye-opening insights on the entire subject of malpractice. It is a subject that no practicing physician can afford to ignore.

The American Cancer Society has kindly agreed to present their expert, Dr. Melvin Shapiro, on the subject of colo-rectal carcinoma.

Dr. George Brannen, from the Mason Clinic in Seattle, Washington, will be presenting recent advancements in kidney stone removal as well as kidney transplantation and Marianne Weiland, artist of considerable renown, has agreed to give us a presentation of her art and the subject of embossed prints. We have asked Byron Birdsall to discuss his recent adventures in New Zealand as well as his art.

All members should have received a preliminary announcement of the meeting as well as a brochure published by the Haines Chamber of Commerce. Advance registrations will be of great help to the Convention committee and Dr. Jones. A solid show of support allows us to proceed with final commitments regarding speakers and facility reservations. If any of you have suggestions as to a topic you would like to see presented, please contact the Convention committee.

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RECURRENT AMELOBLASTOMA: CASE REPORT

Donald G. Chiles, DDS*

David D. Beal, MD

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Ameloblastoma is a neoplasm of enamel organ type tissue which does not undergo differentiation to enamel formation (1). The tumor may be derived from the dental lamina, embryonic rests of the dental lamina, epithelium of odontogenic cysts, basal cells of surface epithelium of the jaws, or heterotropic epithelium of other parts of the body (2).

Studies indicate that ameloblastoma represents 1% of all tumors of the jaws. Eighty percent occur in the mandible with the molar ramus area most commonly involved. It is described as a slow growing tumor; however, a case documenting a 1.5 cm lesion surrounding the roots of an impacted third molar which increased in size to include the entire ramus of the mandible over a six month period has been reported (3).

The first neoplasm of this nature reported in the scientific literature is credited to Broca in 1868. Falkson wrote the first thorough description of an ameloblastoma in 1879. In 1934, Churchill suggested the term ameloblastoma to replace adamantinoma used by Malassez in 1885.

The recurrence of ameloblastomas following various types of procedures has been well documented (4-7). Small reported a recurrent ameloblastoma 25 years after hemimandibulectomy and Hayward documented a recurrent ameloblastoma 30 years after surgical management by curettage (8,9).

Grafft reported 72% recurrence of ameloblastoma following radiation therapy, 46% following curettage, and 13% after resection or hemisection (10). Most agree that the major cause of recurrence is incomplete removal of the tumor rather than the degree of malignancy. The high incidence of recurrence indicates the need for long term follow-up.

Treatment modalities for ameloblastoma suggested in the literature range from curettage to radical resection of the tumor and adjacent tissues. Reaume says, "a successful treatment should be one that offers an acceptable prognosis and leaves the patient with the least disfigurement and greatest ability to function normally" (11). Recurrent tumors require an aggressive approach.

CASE REPORT

A 65 year old white female was seen in consultation regarding a "bump on the side of the head". The lump had been present for several years but seemed to be slowly increasing in size (Figure 1 & 2). The patient's main concern was her "grotesque" appearance.

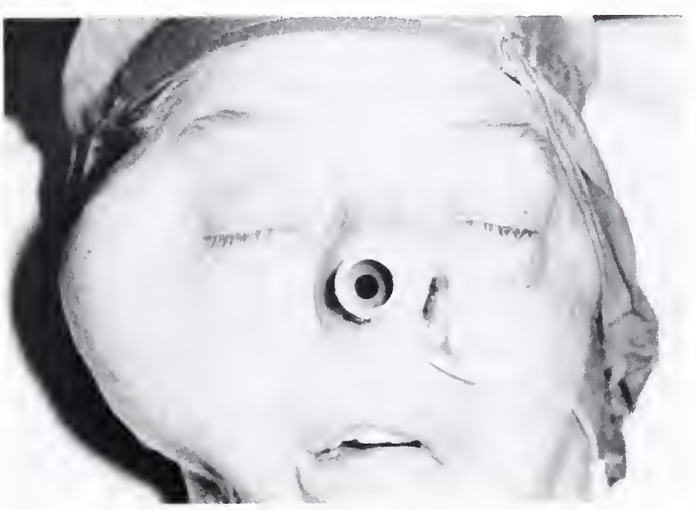

Figure 1

*Associate Professor, Department of Oral and Maxillofacial Surgery Baylor College of Dentistry, 3302 Gaston Avenue, Dallas Texas 75246.

Figure 2

There was a history of "x-ray treatments" for cancer of the jaw. In 1961 she had a right mandibular hemisection with disarticulation for recurrent tumor of the jaw.

Based on her past history the differential diagnosis included fibrosarcoma, metastatic carcinoma, recurrent carcinoma, primary carcinoma, and mixed tumor.

Her past medical history revealed treatment for hypertension and congestive heart failure. There was a known allergy to penicillin. She had been diagnosed having a mild degree of senility.

Physical examination revealed the previously noted firm, non-tender circumscribed mass of approximately 10 cm in diameter in the right parotid-temporal area. The right hemimandible was missing. It had been resected at the right parasymphysis with disarticulation of the right condyle. Radiographs revealed no obvious bony involvement by the mass (Figure 3).

Figure 3

The patient was hospitalized for surgery. Laboratory studies were within normal limits. An EKG revealed an old myocardial infarct. There was a small benign nodule noted in the right lower lobe of the lung on chest X-ray.

Under general anesthesia, a right facial nerve dissection, superficial parotidectomy, and removal of the mass was accomplished. The mass was deep to the facial nerve (Figure 4). Upon direct palpation, the tumor had a firm but spongy feel. An 18 gauge needle was introduced into the mass and a considerable amount of straw colored fluid was aspirated from a cystic cavity. Subsequently, the tumor was split to facilitate its removal and to avoid injury to the facial nerve. There was brisk hemorrhage upon removal of the mass from the depth of the pterygomaxillary fossa. Approximately 1000 cc of blood loss was replaced with whole blood.

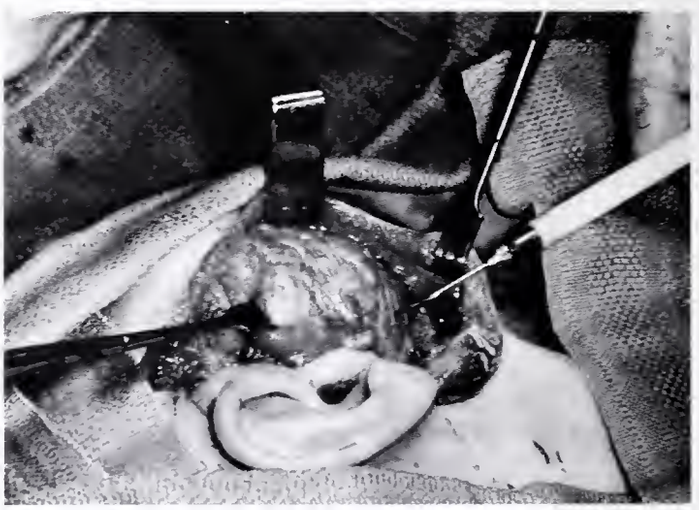

Figure 4

Postoperatively, there was a break down of the incision in the area of irradiated tissue. This was treated with iodoform gauze and Neosporin ointment packs until complete healing was achieved (Figure 5 & 6).

Pathology revealed a 10 x 10 cm cystic mass with markedly thickened walls and islands of solid tumor. Microscopically, there were strands of ameloblast-like cells scattered throughout the tumor. The diagnosis was ameloblastoma. Whether the tumor was a true cystic ameloblastoma or a solid tumor that had undergone cystic degeneration is unknown.

Figure 5

Eight months following removal of the tumor, the patient died of congestive heart failure. At the request of the family, an autopsy was not performed. The lung nodule remains undiagnosed.

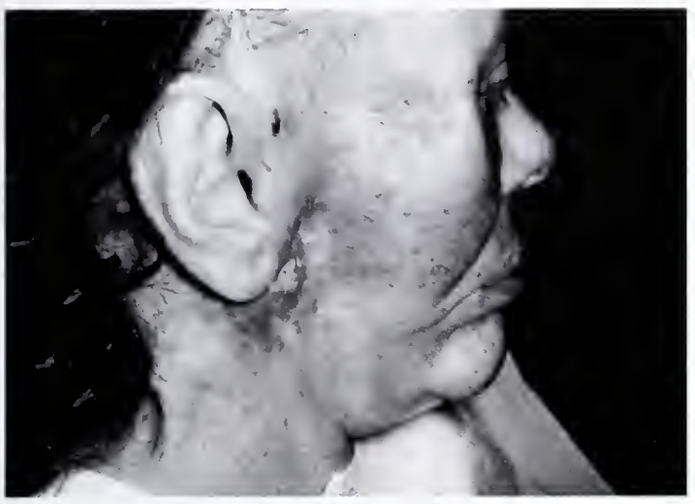

Figure 6

Discussion

A case of recurrent ameloblastoma is reported. Personal communication with the surgeon who resected the patient's mandible ten years prior to the recurrence revealed a diagnosis of ameloblastoma. Apparently the "x-ray treatments" she received 33 years prior to the resection were for treatment of ameloblastoma rather than "cancer". This case illustrates the aggressive, persistent nature of ameloblastoma. It also emphasizes the need for long term follow-up.

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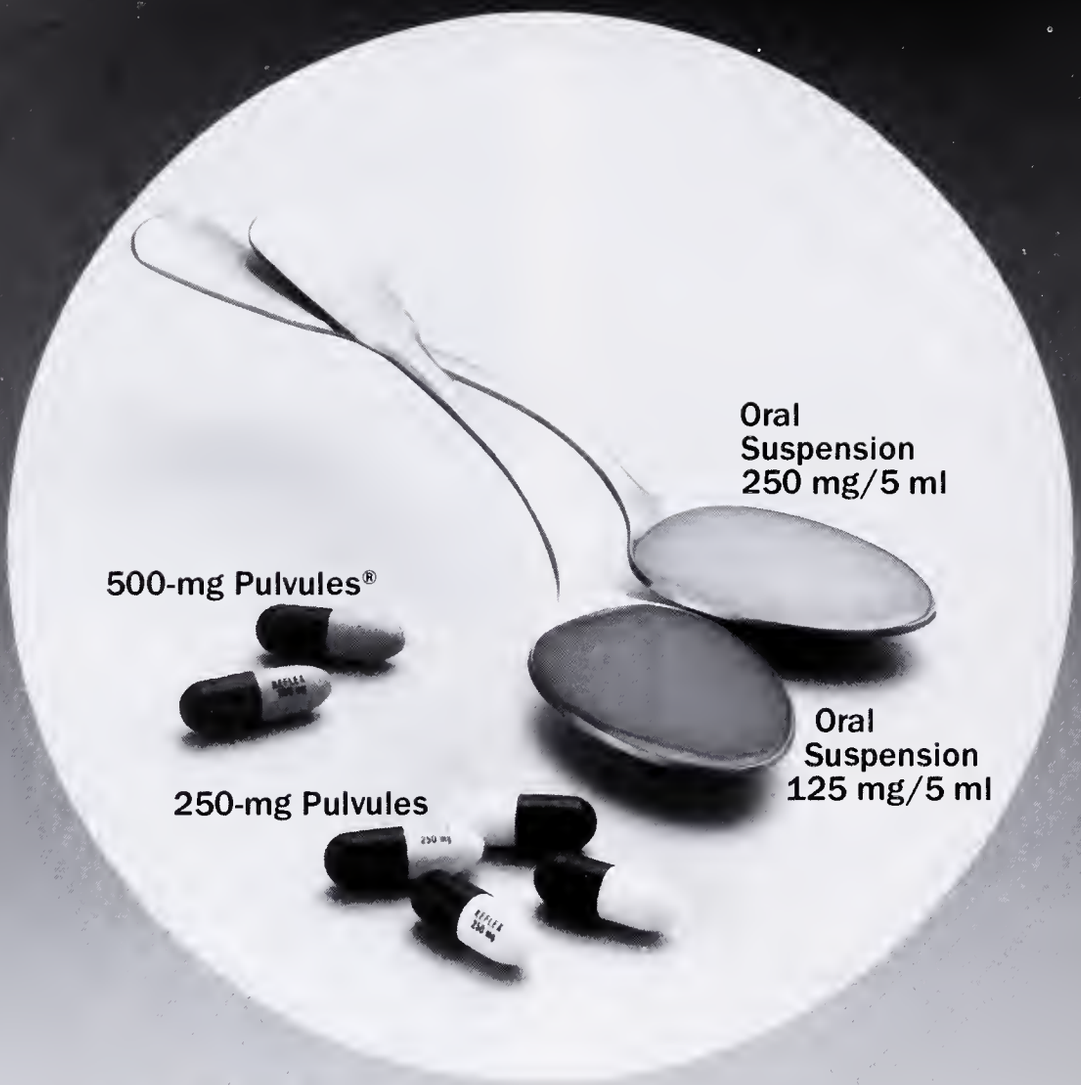

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WHAT'S NEW IN NEUROSURGERY IN THE 1980'S

Richard M. Lehman, M.D.

Reviewing the newer concepts of neurosurgical management and treatment in both operative and nonoperative aspects I would like to analyze their origin, as well as discuss what appears to be the so-called cutting edge for management of various pathologic entities encountered by neurosurgeons.

When I was a resident in the 1960's the modern techniques of anesthesia and in particular the advent of endotracheal anesthesia after World War II were in practice. They greatly reduced morbidity and mortality in neurosurgical operations. The use of mannitol and urea for reduction of intracranial pressure, yielding a "slack brain" at the time of elective surgery, the use of steroids postoperatively, and the newer antibotics were at our fingertips. We had not begun to use the microscope and hence our aneurysm surgery was still somewhat crude. Our professors were struggling with more difficult aneurysms, particularly the anterior communicating artery lesion. By the end of the 1960's neurosurgeons were beginning to use the microscope. The so-called microsurgical techniques, as they applied to neurosugery, were being developed in a few centers. In the 1970's it became the standard. The morbidity and mortality of tumor and aneurysm surgery were reduced, and the enhanced results from all forms of neurosurgery took another leap forward. Surgery of the pituitary gland became a special interest with rebirth of the transphenoidal route. This approach was greatly facilitated by the magnification and illumination of the operating room microscope.

Aneurysm Surgery & Subarachoid Hemorrhage

With the use of the operating microscope the mortality from aneurysm surgery and subarachnoid hemorrhage has been greatly reduced. We began to study ways to prevent rebleeding. The use of epsilon-aminocaproic acid was popular during the 1970's and early 1980's but presently has been largely discarded (11,13,21). Although there may have been some reduction in rebleeds, the onset of delayed vasospasm, attendant ischemia, and stroke-like pictures became the most devastating problem (12). This occurred while waiting for the patient to settle down from the acute subarachnoid hemorrhage and increased intracranial pressure before surgery could be carried out. As a consequence, early operation for those patients (Grade I and II) without spasm on the initial arteriogram, is now being carried out (13). This has been the technique in Anchorage over the past 14 months. Using the protocol we have operated over 20 cases. There are no deaths and no one has been made worse neurologically. The only death in an aneurysm case over the past year was a patient with acute intracerebral hematoma and brainstem compression.

Arteriovenous Malformations

Microvascular techniques have enabled neurosurgeons to deal more effectively with arteriovenous malformations. Although the morbidity, mortality and incidence of rebleeding is much less than with aneurysm, neurological deterioration, chronic headaches and seizures take their toll. Consequently, we have become more aggressive (5). Invasive radiology has been quite an aid with the use of detachable balloons for the carotid-cavernous fistula (4). Intraluminal bucrylate gluing either percutaneously or intraoperatively has been developed in several centers for embolization of more difficult and deep arteriovenous malformations (3). Operative embolization is also an adjunct to the management of the problems.

Cerebrovascular Insufficiency and Carotid Artery Disease

Cerebrovascular insufficiency and carotid artery disease remain a common problem for the internists, vascular surgeons and neurosurgeons. Digital subtraction angiographic screening with reduced

risk to patients with transient ischemic attacks has been a major step forward in investigation. The venous technique carries at least a 60% false negative yield particularly in relation to intracanial vessels (6,18,23). Evaluating the patients requires visualization of the entire cerebrovascular trunk. Endarterectomy for those with a significantly ulcerated and/or stenotic lesion remains the treatment with an attendant mortality/morbidity of 2-4% with less than 5% recurrence of stroke symptoms (1). Superficial temporal artery to middle cerebral artery bypass for intracranial stenoses may benefit cerebral perfusion (26,30). Other procedures can be carried out by various grafting techniques lower in the brachiocephalic trunk either by the neurosurgeon, or as a combination procedure with various members of the cerebrovascular team (2).

Brain Tumor

Glioma, the most common primary intracranial tumor still remains an enigma. Patients with malignant gliomas have an expected survival rate of about a year to 18 months, particularly when radical surgery can be carried out followed by radiotherapy. Attendant primary chemotherapy, in addition, may offer several months further survival. The malignant neuroepithelial tumors of childhood are showing a better prognosis with radical surgery and radiotherapy. Pituitary tumors have rekindled the neurosurgeon's interest in neuroendocrinology. The management of the endocrine active tumors causing acromegaly, Cushings disease, and hyperprolactinemia, has created a new sense of teamwork among endocrinologist, neurosurgeon and ophthalmologist (10). The preferred treatment for these endocrine active tumors has been established. Removal of the microadenoma should afford the patient who does not have extension of such a tumor outside the sella a 75% chance of endocrine cure. The nuances of Bromocriptine use preoperatively or postoperatively with a prolactinoma or as a primary treatment still remains in flux (27). The larger macroadenomas require more radical removal of the tumor and decompression of the optic pathways, and at times relief of intracranial hypertension. The transphenoidal versus the transfrontal approach remains a decision of the particular neurosurgeon. Acoustic neurinomas are now being removed in some cases with preservation of usable hearing in the afflicted ear. Microsurgical techniques have enhanced the ability to do it (17,20). Management of these tumors and certain meningiomas compressing cranial nerves and/or carotid arteries has further been augmented by use of the carbon dioxide laser which allows tumors to be vaporized or coagulated without actually touching them (22). Further work is being done with the Neodinium Yag laser on larger meningiomas, more vascular tumors and arteriovenous malformations.

With the coming of neonatal intensive care physicians, aggressive treatment of intraventricular hemorrhage and neonatal hydrocephalus has been quite evident in Anchorage (9). Shunt dysfunction and shunt infection still remain a significant problem. The use of intrathecal antibiotics for gram-negative infections has been quite helpful (8).

Trauma

Trauma remains a major source of loss of life, loss of gainful occupation, and chronic disability in Alaska. Alcohol and gasoline is the major causative mixture. The use of CAT scanning for identification of an intracranial hematoma and the prompt surgical evacuation is increasing the salvage rate. Training of the EMT technicians throughout the state in the prompt diagnosis and transport of patients to special units has been of further benefit. Early control of intracranial hypertension with mannitol, endotracheal intubation, correction of hypoxia and hypotension are standards of treatment (29). Hypoxia and hypotension are most significant additive factors to the degree of brain injury and are important to be recognized and treated. Intracranial pressure monitoring is utilized in those patients exhibiting either a midline shift on CAT scan or those with normal CATs who are unconscious without verbalization exhibiting decerebrate posturing (19,28).

Combined orthopedic-neurosurgical management of patients with spine trauma and spine tumors, both primary and metastatic, has rendered improved results. Combined anterior decompression via a retroperitoneal or transthoracic approach to the ventral aspect of the lumbar and thoracic spinal canal followed by a posterior stabilization procedure has been carried out (7,24).

Peripheral Nerve Surgery

Peripheral nerve surgery has also been enhanced by microsurgical techniques. Repair of the clean, sharply divided nerve at the time of injury with epineural or combined epineural and perineural suturing is preferred. Delayed repair for the untidy, contused wound or where section of the nerve is in doubt remains the standard. Following the patients clinically with electrical studies is required. Undue delay in exploring a nerve which is not showing timely clinical or electrical return of function is no longer warranted (15). Intraoperative stimulation and recording of nerve action potentials can be accomplished (16). Use of cable grafts, particularly the sural nerve to bridge defects is better than stretching the nerve or using undue flexion to assist in bridging the gap. Use of 10-0 nylon for these fascicular grafts allows less foreign body reaction. This requires practice. Presently a microvascular lab has been opened at Humana Hospital in Anchorage so that all surgeons can stay current in microsurgery.

Diagnostic Methods

The CAT scan remains the workhorse of neuroradiologic investigation, not only of the head but of the spine. Since its first use clinically in the late 1960's and early 1970's it has revolutionized and changed the practiced of neurology and neurosurgery. The newer machines with their higher resolution have improved the diagnostic capabilities immensely. Nuclear magnetic resonance imaging will produce even clearer pictures. With it has come a rebirth in stereotactic surgery so that deep tumors, cysts, abscesses, etc., can be biopsied. Placement of intersitial radiation is now becoming popular. The combination of sterotaxis and the laser beam is now being used for deep tumors (14).

Functional Neurosurgery

Intracerbral recording for epilepsy and movement disorders requires the use of stereotactic appratus in conjunction with CAT scanning. Use of subdural electrodes, modeled after those of the University of Washington Biomedical Department for lateralizing seizure focus in temporal lobe cases have been used.

Summary

In looking back over the past 15 years, I have seen the use of modern anesthesia, more understanding of cerebral blood flow and intracranial hypertension, and better management of the problems. The use of operating room microscope and CAT scanning have been the major new additions to neurosurgery revolutionizing neurosurgery and bringing it to the present position in the 1980's. More sophisticated diagnostic methods, further reduction of mortality with enhanced therapeutic laser techniques etc., will continue in the ensuing years.

*The above paper was presented at Valdez during the 1984 ASMA Annual Convention.

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MEDICINE — IN TROUBLE

Ladies and Gentlemen:

Many of you are here to learn various laser techniques in order to help your patient in this country, our neighbors north and south and our brothers and sisters world wide. What most ophthalmologists in the country don't know or even suspect is that they are about to be joined in their interesting work by optometrists without a medical education, the MD degree, an internship, residency or a license to practice medicine and surgery. Some of these renegades are already calling themselves optometric physicians. Can optometric surgeons be far behind?

In 36 of our 50 states this is already true. In the war against optometric usurpation of the MD's well-earned prerogatives we have lost 36 battles. If we lose 14 more we will have lost the war. Where optometrists have moved in are chiropractors, naturopaths and faith healers far behind? I'm afraid not! One chiropractor has already sued and fortunately lost a suit in which he sought hospital privileges. In some states medicare pays for chiropractic services, whatever that may mean.

I have been an academy member since 1946. I am not bucking for anything. Three years ago little changes in my maculas made me give up surgery. More recently I have had to use a penlight to be sure of the numbers on the phoropter. So I will have to give up ophthalmology altogether devoting what time is left to politics and writing. Like the girl in Oklahoma, "I've gone about as far as I can go". Thus I have volplaned from the profession most highly esteemed by the public to one of par with dishonest used car salesman.

Politics is a rough and tumble life. Some of you have been involved in academic or hospital politics, but compared to politics in the real world it is like equating a pillow fight with atomic warfare. I would ask you to read an essay I wrote for Alaska Medicine in September. It suggests one way we can win this war for survival and the good of our patients.

Airline pilots pay over 6% of their yearly salary in dues to the airline pilots association. Instead of being men and women of substance they would be flying office boys or clerks, if they did not contribute substantially to political activity. Can we do any less if we are serious?

In order to reverse the tide of battle we need two things that every successful politician needs in his/her work in the legislatures of our 50 states — money and votes. We have plenty of money. We just have to disgorge some of it. What we badly needed in the 36 states that have made optometrists into JG (junior grade) ophthalmologists and will need if we are to contain the metastasis of this cancer to the 36 states already lost is votes. So far the votes of our families, friends, employees and patients have not been sufficient. The strategy has failed. It's time to try something different. We must be slow to learn if we persist in doing something that has failed 36 times already.

I see many bald, gray and white heads among us. I also note with pleasure the increased number of women. Women are the civilizing sex. I know that among you and perhaps even the younger ophthalmologists many have had opticians stake you at impressive discounts to instruments, architects' plans, office space and furnishings without which you could not have opened your doors. How many times has an optician shielded you from the well deserved wrath of a patient with a poorly written, illegible or downright wrong spectacle prescription, taken the blame on him/herself and absorbed the cost leaving you intact as little tin gods/godesses. What have we done in return? Far too many of us have opened little optical shops in connection with our offices to peddle glasses and contact lenses omitting to send our patients to our optician colleagues which is the right and proper thing to do. In 1946 it was unethical for an academician to have any financial interest in opticianry. In my opinion it still is, for it represents the most blatant conflict of interest.

There are over 25,000 opticians in the USA. There are two national optical societies. There is an optical society in almost every state; we even have one in Alaska. Many populous countries and cities have optical societies. Each optical shop, whether a one man/woman operation or employing scores, has its constellation of spouses, friends, relatives, business and service clubs, and other associations. The number of votes this represents is truly awesome. We must mobilize those votes in our behalf.

Now realize that optometrists are even more blatant than we, with commercial outlets attached to their offices while trying to make like ophthalmologists. Opticians want optometrists out of opticianry too.

The laws in 36 states that permit optometrists to instill drops on the human eye passed only after the bitterest of struggles — often by only one vote. In some cases only the veto of an understanding governor prevented us from being wiped out. So it should be diaphanously clear that we must actively seek the assistance of the opticians our natural allies in this war 18/25's of which we have already lost.

It may come as a shock to some of you but in

politics you don't get anything for nothing. Sometimes the return favor is not sought for years, in others it is asked for in nanoseconds. In our case the price of mobilizing the colossal political clout of opticianry is to get out of it ourselves. Academicians should have no direct or indirect connection with opticianry. Of course, grandfather rights have to be respected. But still, this concession to deep prospective academicians and present members not already involved out of opticianry would be giving something in return for these vital votes.

Losing the battle in 36 states shows us that we have to change our ways to win. With this concession we would be able to secure enough votes to get anything we want for our patients in the public interest. So how do we go about it? We start by revising our bylaws. In the meantime our president calls the president of the Guild Opticians of America and Optical Association of America on the phone person to person and invites him/her to the best available lunch. None of this stuff of getting the president of the guild to the phone only to hear some underling say, "Just a minute for Dr. Blank", until that great man comes to the phone. Well my friends, until that you get the picture. It's either this or 14 more lost battles and a lost war. A sad fate for the bequest left us by the giant ophthalmologists of the past. Sure, those with optical shops can keep them until they die or see the error of their ways. Present and future members may be ophthalmologists or opticians but not both. Of course, the same goes for the state, county and city ophthalmological societies. Call the optician. Be on the phone when he/she gets there. As a three term House member in Alaska, I can't over emphasize the importance of telephone manners: even before so sophisticated and well-educated a body as this, which I know from repeated experience, somehow see itself as always being busier than the one it calls.

The president of the United States can have some staffer call me and say, without busting my ego, "Just a minute for President Reagan". So can a member of Congress or the Governor of Alaska. As for the great unwashed and lesser lights, I am just as important as they are. And I'll bet if you ever thought of it, so are you.

I suggest the same can be done with nurses. What they want for return for their support is a wage commensurate with being fellow toilers in the vineyard. Mr. President, ask her to lunch or dinner. Hell, you might even enjoy it.

The same goes for dentists who in return would want us to support legislation preventing dental hygienists from opening little offices of their own, becoming in the process, dentists junior grade.

Well, there it is my friends. A little time, a little tactful effort and some money will assure us the votes necessary to bring victory in the 14 remaining states and reverse the action in the 36 states temporarily lost. I love my profession and my specialties. I came from the wilds of Alaska to deliver this and will return to obscurity content in the knowledge that I have done my best to repay a heartfelt debt to medicine.

Milo H. Fritz, M.D.
Diplomate of American Academy of Ophthalmology
Diplomate of American Academy of Otolaryngology

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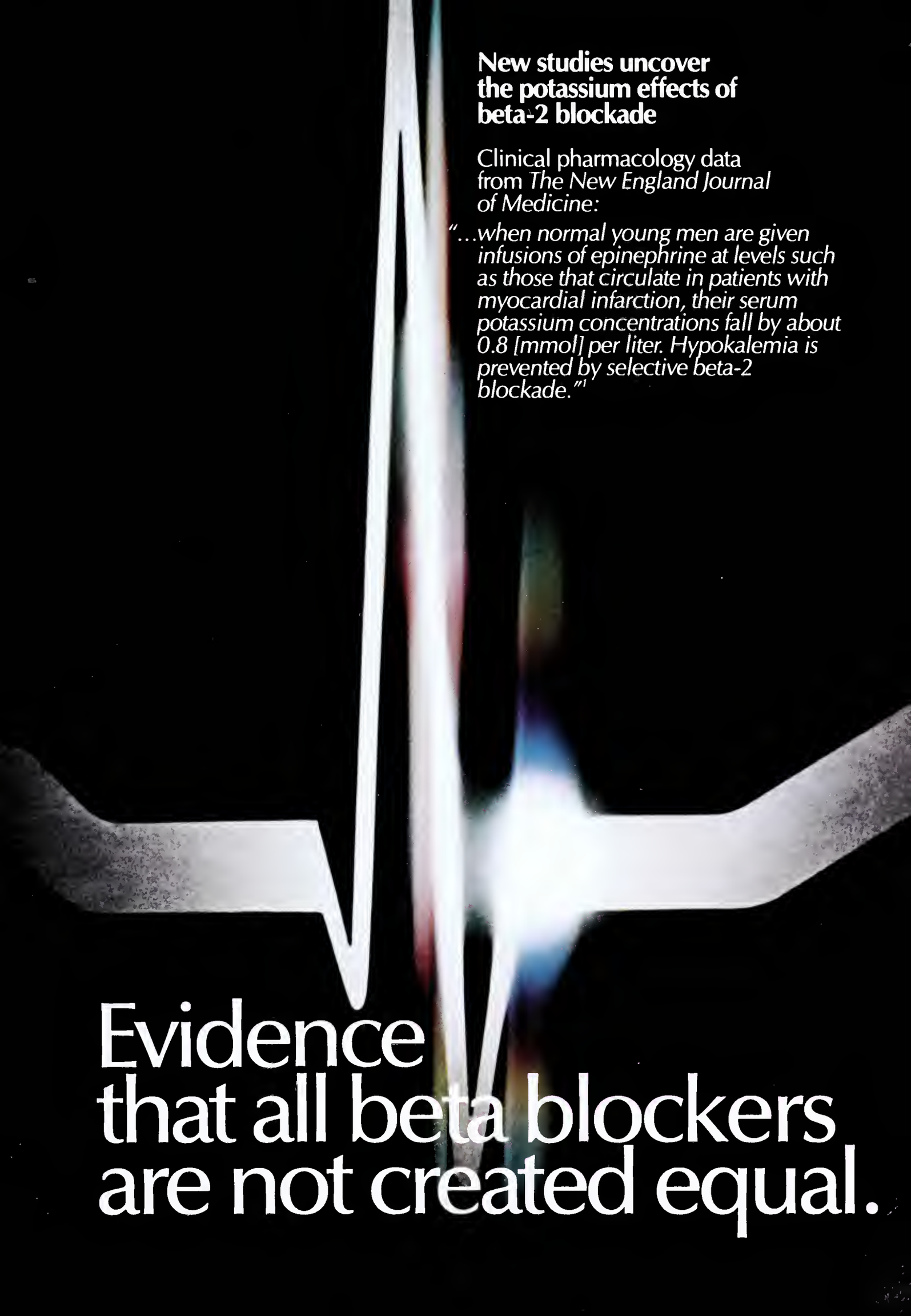

New studies uncover the potassium effects of beta-2 blockade

Clinical pharmacology data from *The New England Journal of Medicine:*

"...when normal young men are given infusions of epinephrine at levels such as those that circulate in patients with myocardial infarction, their serum potassium concentrations fall by about 0.8 [mmol] per liter. Hypokalemia is prevented by selective beta-2 blockade."[1]

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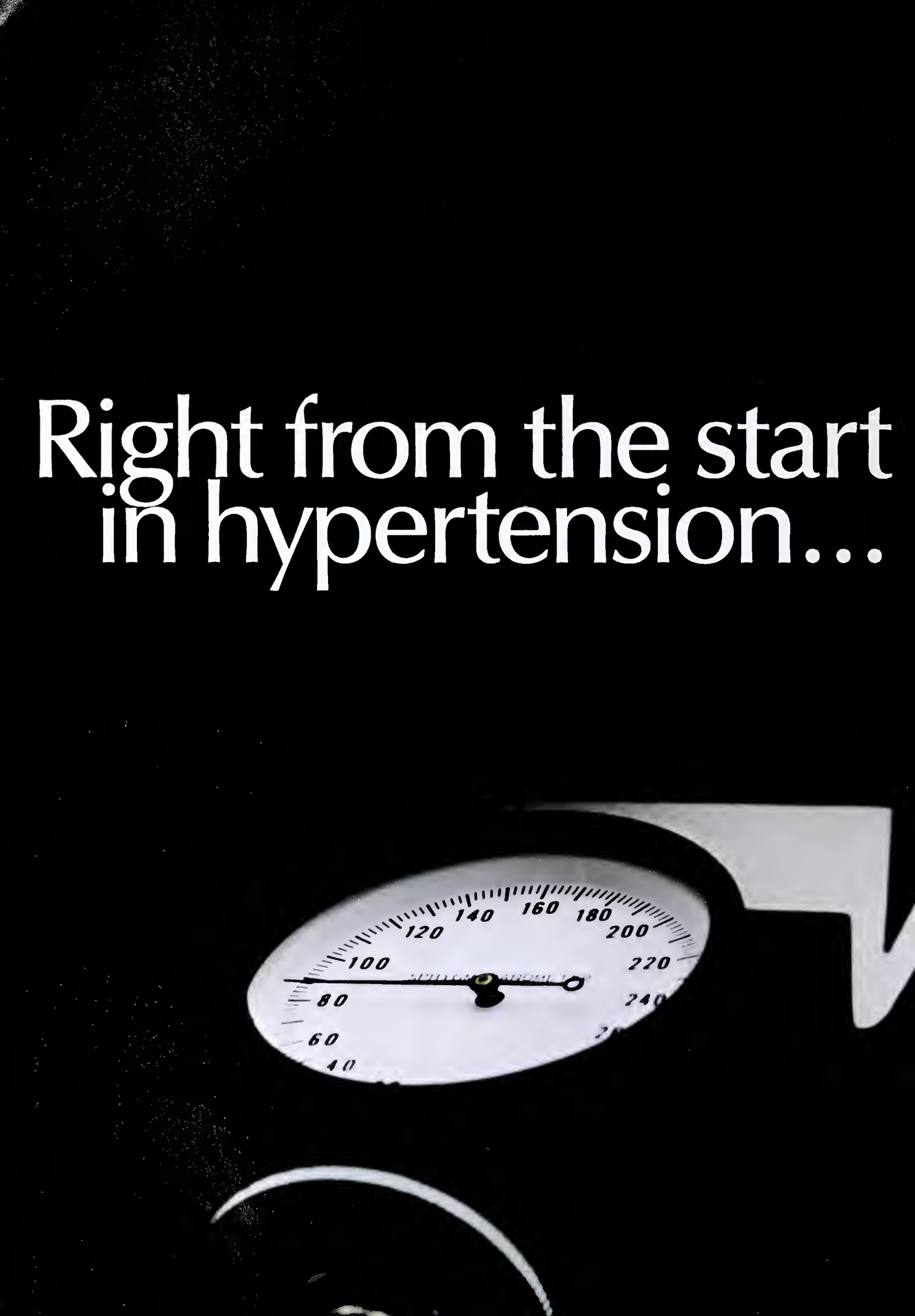

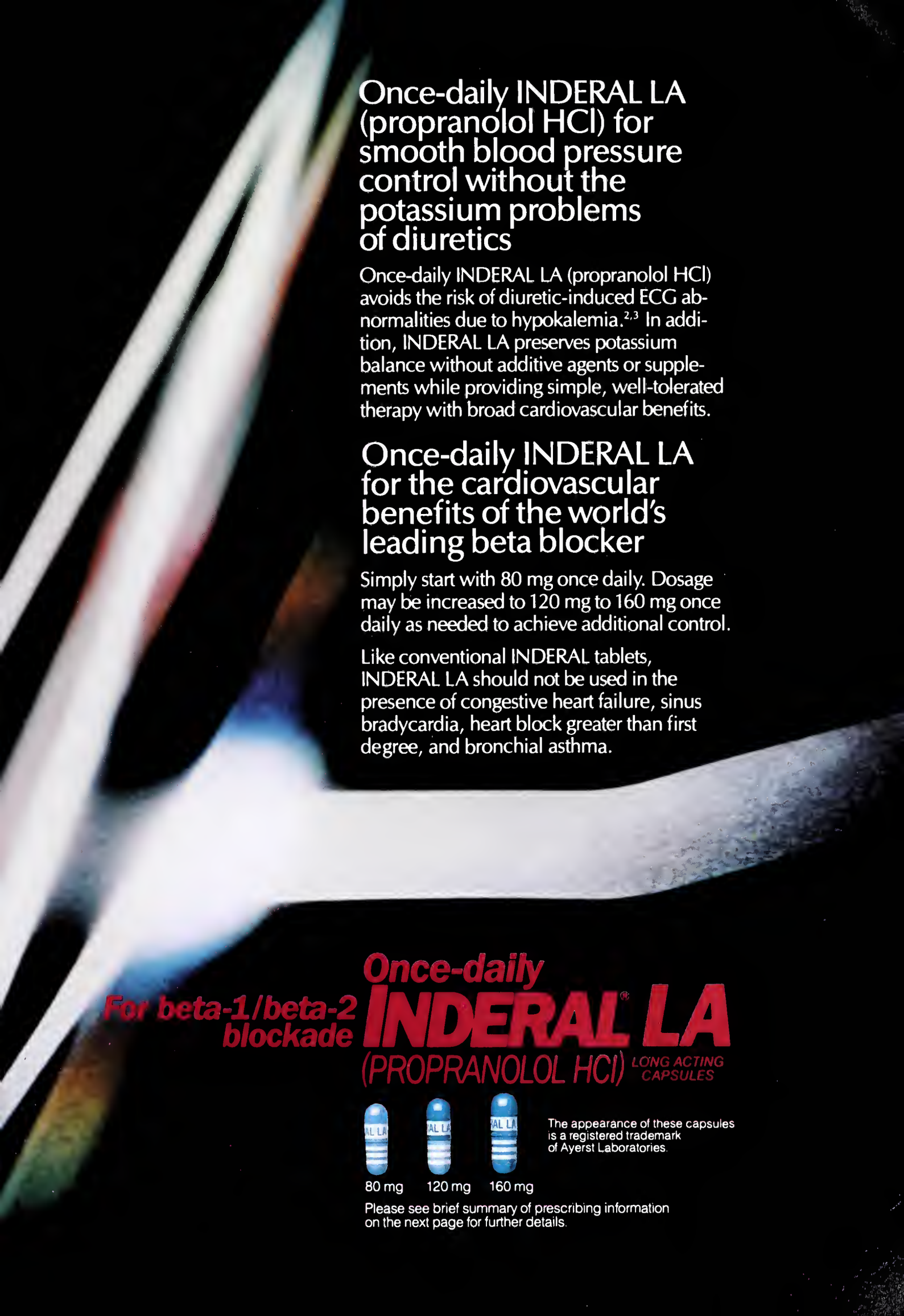

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INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely; or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)— PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of β receptor agonists and its effects can be reversed by administration of such agents, dobutamine or isoproterenol. However, such patients may be subject to protracted s hypotension. Difficulty in starting and maintaining the heartbeat has also been reportec beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the pearance of certain premonitory signs and symptoms (pulse rate and pressure chang acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroi Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symp of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have reported in which, after propranolol, the tachycardia was replaced by a severe bradyc requiring a demand pacemaker. In one case this resulted after an initial dose of propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impa hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatme hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Pa should be told that INDERAL may interfere with the glaucoma screening test. Withdrawa lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart dise elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as r pine should be closely observed if INDERAL is administered. The added catecholam blocking action may produce an excessive reduction of resting sympathetic nervous ac which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or ortho hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studi both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of signif drug-induced toxicity. There were no drug-related tumorigenic effects at any of the do levels. Reproductive studies in animals did not show any impairment of fertility that attributable to the drug.

Pregnancy. Pregnancy Category C. INDERAL has been shown to be embryotox animal studies at doses about 10 times greater than the maximum recommended human d

There are no adequate and well-controlled studies in pregnant women. INDERAL sh be used during pregnancy only if the potential benefit justifies the potential risk to the f

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised w INDERAL is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block; h tension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insom lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, v disturbances, hallucinations, an acute reversible syndrome characterized by disorientatio time and place, short-term memory loss, emotional lability, slightly clouded sensorium, decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarr constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with ac and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytop purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has b reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male in tence, and Peyronie's disease have been reported rarely. Oculomucocutaneous react involving the skin, serous membranes and conjunctivae reported for a beta blocker (pract have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride sustained-release capsule for administration once daily. If patients are switched from INDE tablets to INDERAL LA capsules, care should be taken to assure that the desired therape effect is maintained. INDERAL LA should not be considered a simple mg for mg substitut INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration be necessary especially to maintain effectiveness at the end of the 24-hour dosing inte

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may increased to 120 mg once daily or higher until adequate blood pressure control is achie The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of mg may be required. The time needed for full hypertensive response to a given dosag variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL once daily, dosage should be gradually increased at three to seven day intervals until optim response is obtained. Although individual patients may respond at any dosage level, average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few we (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL once daily. The usual effective dose range is 160-240 mg once daily. The dosage may increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is obtained within four to six weeks after reaching the maximum dose, INDERAL LA ther should be discontinued. It may be advisable to withdraw the drug gradually over a perio several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are limited to permit adequate directions for use.

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DON'T TAKE IT AWAY

The narrative is true. The event occured during a Public Health Service field ophthalmology clinic in Nome, in 1937. The patient was an 80 plus year old Eskimo who had been essentially blind for the last 70 years due to childhood scarring from phlyctenular keratoconjunctivitis. My husband and I had the rare privilege of observing what was to the patient a miraculous cure. Sans pain or expense, and in only an hour's time, he was given back his sight. His reaction is the best part of the story

The old man's eyes were covered with tell-tale scars of tubercular phlyctenular keratoconjunctivitis, which had left him blind. He had, moreover, a severe conductive hearing loss, which, compounded with his language of Siberian Eskimo, rendered him incapable of communicating with the English-speaking medical personnel. He seemed, however, remarkably at peace in the abyss.

He was short and bandy legged, and when he walked, his rolling gate caused his mittens, suspended from a rope of yarn to swing from side to side, over the brightly colored cloth of his parka. He was led by two old women, whose chins were tattooed with the traditional lines radiating from their mouths. They wore *kuspuks* of riotous prints in brilliant hues. The three made a florid trio, trimmed in fur, treading softly in their seal skin mukluks, across the clinic floor.

They had come from Little Diomede to the Public Health Ophthalmology Clinic in Nome. It was a make-shift affair with a visiting doctor from Anchorage, portable equiptment, and rows of chairs, upon which perhaps forty Eskimos waited, moving one chair at a time, in line to have their eyes examined.

The three took a place among the quietly waiting patients, who were variously sitting, rocking babies on their backs, tucked away under parkas, or speaking softly to the young children who were in line.

When the old man's turn came to be checked for glaucoma, he climbed up onto the table and held very still for the drops of ophthaine and placement of the tonometer on his globes. The nurse noted on his chart that corneal scar tissue made an accurate reading of his pressures impossible. His visual acuity was recorded as "finger counting — two feet".

The doctor's examining chair was set up in a small cubicle off the main waiting room. It held two chairs for waiting patients, as well as the major one, in which the person being treated was to sit. The old man's companions led him to the doctor's chair, and seated themselves in the waiting stations.

Retinoscopy revealed extremely irregular reflexes, but by leaning very near to the old man's eyes, the doctor roughly determined the patient's marked astignatism, and selected a pair of lenses which nearly neutralized his refractive error. He placed the lenses in the phoropter, and started to swing the instrument in front of the patient's eyes, when one of the waiting women volunteered, "Old Raymond, his eyes got bum when he was just a boy. They got real red, and they was hurtin' real bad. The health aid, she rubbed charcoal in 'em, but it don't do no good. They still bum."

At this bit of medical history, the doctor nodded knowingly, and swung the lenses in front of old Raymond's eyes. Suddenly, there was pandemonium. From behind the phoropter, Raymond grabbed the doctor's wrists, and began shouting various phrases in Eskimo, jerking up and down in the chair. When he discovered he had to be still in order to see through the instrument, he momentarily did, to verify his wonderment, and then began to bounce again.

The two old women began to laugh, and converse in their native tongue. The doctor stood there baffled, until the two women interpreted Raymond's exclamations.

"He says, It's wonderful. Don't take it away. Don't take it away."

After prying loose from the patient's grip, the doctor used the Jackson cross-cylinder to further refine the axis and power of the astigmatism, although Raymond seemed reluctant, almost obstinate in his unwillingness to give up whatever it was that had magically made him able to see. By the end of the refraction, he was nodding enthusiastically for the 20/30 line.

In a complete break from standard procedure, the doctor concocted a temporary pair of glasses for the old man by wiring the trial lenses to a heavy frame intended to hold them for refracting. With none of the dignity with which he arrived, Raymond shuffled around the waiting room, peering into the faces of the other patients and laughing out loud between incantations of "Don't take it away."

Sandy Wolf, M.T., A.S.C.P.

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LETTER TO THE EDITOR

Dear Editor:

The value of x-ray examinations in defining the type and extent of disease in many clinical situations has long been recognized. However, public and professional concern over the potential risks from radiation exposure and the increasing costs of x-ray examinations have led to studies of methods to reduce unproductive examinations, that is, examinations that do not yield information useful to patient care decision making. One exam which has received particular scrutiny is the chest x-ray. This letter is intended to provide a summary of specific referral criteria on the chest x-ray which were developed by a panel of medical experts.

The chest x-ray is the most frequently performed x-ray examination in the United States. These examinations generally do not involve patient discomfort, are not invasive and are relatively easy to perform. They are a component of most periodic physical examinations and in many cases have become an automatic requirement in the health evaluations. It is estimated by the National Center for Devices and Radiological Health of the Food and Drug Administration that in 1980 there were 52 million chest x-ray examinations performed in the United States hospitals alone. In addition there are a significant number of chest x-ray exams performed in other settings such as private physician's offices and clinics. Another study indicated that about 60 percent of the chest x-ray exams conducted were performed for routine screening purposes. If this percentage were applied to the overall number of x-ray exams taken in the United States, one can see the tremendous cost of these administratively required x-rays which have little or no potential benefit for patient care.

From the radiation exposure standpoint, chest x-rays fall into the category of low dose examinations; however, collectively they contribute to significant population dose. Therefore, before an x-ray exam is requested the physician must judge whether it has an acceptable probability of affecting patient care. Professional, patient and legal pressures complicate the situation and sometimes influence physicians into referring patients for x-ray examinations they may otherwise consider unnecessary.

These considerations lead to the establishment of a chest x-ray panel of acknowledged experts in all facets of medical care to review the efficacy of diagnostic chest x-ray screening in an asymptomatic population.

Over the past years these experts have studied and developed x-ray referral criteria statements for use of the chest x-ray examination in five areas. These criteria are based on the experience of many practitioners and are designed to assist referring physicians for this particular exam where the diagnostic benefits are unclear or questionable. Referral criteria statements of the panel cover the following:

I. **Routine chest x-ray screening examinations.**
II. **Routine prenatal chest x-ray examinations.**
III. **Routine hospital admission chest x-ray examinations.**
IV. **Chest x-ray examination for tuberculosis detection control.**
V. **Routine chest x-ray examinations for occupational medicine.**

The following are quotes from statements prepared by the panel on the use of chest x-ray examinations for the categories listed above. The complete text of the five referral criteria statements plus a brief discussion of the rationale for the development of each statement is presented in a publication entitled "The Selection of Patients for X-ray Examinations: Chest X-ray Screening Examinations" published by the National Center for Devices and Radiological Health. This document is available by writing to NCDRH, Food and Drug Administration (HFX-28), 5600 Fischers Lane, Rockville, Maryland 20856 and requesting HHS publication (FDA) 83-8204.

I. **REFERRAL CRITERIA STATEMENT FOR MANDATED ROUTINE SCREENING CHEST X-RAY EXAMINATIONS.**

The yield of unsuspected disease (e.g., lung cancer, heart disease, and tuberculosis) found by routine mandated chest x-ray screening examinations of unselected populations, not based on history, physical examination, or specific diagnostic testing, has been shown to be of insufficient clinical value to justify the monetary cost, added radiation exposure, and subject inconvenience of the examination.

It is therefore recommended that all such mandated routine screening examinations of unselected yield be discontinued.

II. **REFERRAL CRITERIA STATEMENT FOR ROUTINE PRENATAL CHEST X-RAY EXAMINATIONS.**

The yield of unsuspected disease found by routine chest x-ray examination of unselected pregnant patients (e.g., by protocol or by mandate) has been shown to be of insuffi-

RISK MA

Emergency Medicine Part II:

A significant disadvantage to the practice of emergency medicine is the often transitory contact with the patient.

In the last article on emergency medicine, the Alaska "Good Samaritan" statute was reviewed in some detail. In this concluding part, various aspects of emergency medicine as they may affect the Alaska physician will be discussed.

"Emergency medicine" is the delivery of medical care in an emergency. Any physician — from pathologist to dermatologist to ophthamologist — may become involved in such care.

Such treatment may be performed under the most arduous of circumstances; any analysis of the physician's conduct will likely be performed at a leisurely pace by a person who is at best objective. A psychiatrist may be called upon to immediately decide whether a cardiac rhythm strip shows ventricular tachycardia or a supraventricular tachycardia with abberant conduction, and to then act decisively upon the conclusion. A cardiologist may later spend a quiet period of time with the strip, searching for hidden P waves. The contrast between life in the emergency medicine trenches, and life in the walnut paneled conference rooms is frustrating, but it is a contrast with which every physician must live.

An example of the standard to which physicians may be held is graphically illustrated by the following case, from an eastern city: The plaintiff, a fellow in his twenties, attempted suicide by ingestion of pharmacologic substances. He was found nearly comatose, and taken to an emergency room. While in the emergency room he went into cardic arrest, and was treated by the defendant physician and hospital staff personnel. The code was lengthy, but he was eventually successfully resuscitated. During the resuscitative efforts his eyes were continuously open. He developed corneal drying which went unnoticed, and no "artificial tears" were applied. He sued all involved in his care for damages arising from resulting corneal ulcerations — and prevailed in the suit. It was held not to be a sufficient defense that all efforts were focused on life sustaining matters; the standard of care was held to include attention to the apparently less important matters, as well.

In a legal climate where such aberations of are as common as tornados in Kansas, it is easy for the physician to simply assume that he or she may at anytime be hurled into a jurisprudential land of Oz. While there are no ruby slippers, there are steps physicians may take which can go a long way to protecting against such evils.

The physician who pops into a patient's life for a few moments, and then flits out again, is hardly likely to develop a solid physician-patient relationship. The patient may not even remember the doctor's name or face, and if the patient later has questions or concerns about the medical care, he is less likely to seek out the physician to clarify them.

A simple remedy for this rather brittle situation is the demonstration of genuine concern for the patient's welfare. This is easily amplified by a personal call by the physician to the patient the day following the delivery of medical care to inquire as to the patient's well being. Patients are almost universally flattered and impressed by such calls. The resulting conversation also allows the doctor to make a rough assessment as to whether further followup care is advisable. The calls seldom take more than a few minutes each, and are probably the least expensive form of malpractice insurance a physician can purchase.

Patients seldom sue physicians whom they like. There are many less-than-qualified physicians who never get sued, simply because their patients love them. There are many technicallly expert physicians who get hauled into court because they are unable (for whatever reason) to communicate a genuine sense of concern to the patient. Not all of us can be so fortunate as to have only appreciative patients, even when we try our best to communicate our commitment to them. For that reason it is important to touch certain legal bases, in addition to delivering acceptable medical care.

As mentioned in an earlier column, physicians must always obtain consent before performing any procedure on a patient. Generally, that consent must be "informed" — mere consent will not do. Treating a patient without first receiving informed consent generallly results in an assault and battery by the physician, for which the patient may be compensated. Compensation under those circumstances is permitted irrespective of the quality of care rendered. In an emergency situation, however, it may be impossible to obtain informed consent. What then?

In a life threatening emergencies in which patients are unable to communicate consent to emergency procedures necessary to sustain life, courts have universally allowed the rendition of such care. Judges have conjured up a variety of phrases and explanations for the departure from the usual requirements, including "implied" consent.

Whatever the rubric, the physician is usually protected when rendering life-supportive services in emergencies to patients incapable of giving informed consent.

The situation is considerably more complex, however, when the care is required for reasons other than to sustain life, or when a patient revokes consent. The first case is frequently seen by the emergency physician: An intoxicated patient with a minor laceration presents, answering all questions with inappropriate or incomprehensible

AGEMENT

mumbling; the physician determines that neither the mental status nor the wound is life-threatening. The doctor should probably seek a court order or require a civil commitment before rendering aid, or risk a subsequent claim of assault and battery.

The second case is more rare, but considerably more fraught with danger. Imagine the following: A pregnant woman presents with a history of spontaneous onset of vaginal bleeding, and is admitted to the hospital after signing the customary general consent form. When informed that a Cesearean delivery is required, she revokes her consent. Is the revocation valid? A competent person may always withdraw consent, and treatment delivered in contravention of that withdrawal is subject to judicial redress. If the hypothetical woman here is competent, she may withdraw consent. A New Jersey court considered just such a case, and ruled that a physician would have to wait to obtain consent before performing the Ceserian delivery. If such a delay would threaten the life of the fetus, however, it would seem that every effort should be made to obtain immediate judicial review of the situation.

The need for adequate medical records to which the physician can later refer is no less real merely because medical care was provided on the side of a roadway, or in a restaurant.

A physician rendering emergency care should carefully record the matter. The record of the event should be as complete as necessary to thoroughly describe what transpired. All of the general rules concerning medical records apply to those dealing with emergency care. It is particularly important that they be legible, that all medications be accurately recorded with time and amount of delivery, and that any errors be corrected by a single line drawn through the incorrect entry so as to leave it legible.

Nature abhors a vacuum, and judges abhor vacuums in medical care delivery. It is crucial that every reasonable effort be taken to provide a patient with continuity of care. It is generally not enough to simply provide immediate care for the patient who presents in an emergency: the health care provider must see that all appropriate followup care has been arranged. Consider the following case: The patient presents with a fracture of the radius which the health care provider, a pathologist, properly diagnoses. The physician splints the injured forearm, and tells the patient to see an orthopedist the following day. The patient fails to comply, and a malunion eventually results. Most plaintiff's lawyers would argue that the pathologist abandoned the patient by not providing more explicit followup care. Rather than risk court agreement with this argument, the physician should be considerably more diligent in post-treatment followup. The physician in this case should select at least one orthopedist, should contact the orthopedist, and should arrange a specific appointment time. The name and address of the orthopedist and the time of the appointment should be communicated to the patient both verbally, and in writing. All such activities should be documented in the patient's chart. Ideally, the physician should personally contact either the patient or the orthopedist to insure that contact between the two was made.

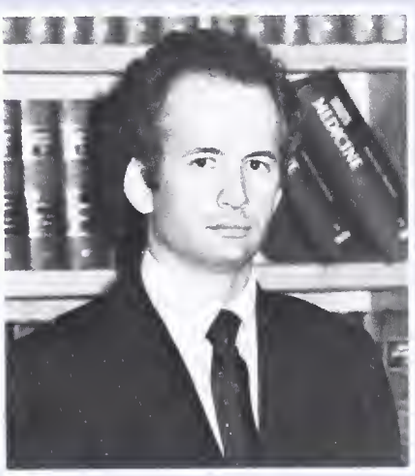

PHOTO BY CHRIS GIBBS

The patient of today expects the technology of tomorrow to be delivered with the compassion of yesterday.

In emergency situations, there is seldom the time necessary to develop the mutual trust and confidence necessary for a physician-patient relationship. It is important that physicians protect themselves in emergency situations by obtaining necessary consent, and preparing proper records. The communication of a true concern for the welfare of the patient and appropriate attention to followup care, will go a long way toward minimizing the risk of subsequent patient hostility.

Lee S. Glass, M.D., J.D. — has addressed numerous groups on risk management including the international College of Surgeons and the Department of Orthopedics, University of Washington School of Medicine. Glass practices law with Faulkner, Banfield, Doogan & Holmes in Anchorage and Seattle. He is also obtaining postgraduate medical training at the University of Washington.

cient clinical value to justify the radiation exposure, inconvenience to the pregnant patient, and monetary cost.

It is therefore recommended that all such routine prenatal chest x-ray examinations be discontinued.

III. REFERRAL CRITERIA STATEMENT FOR ROUTINE HOSPITAL ADMISSION CHEST X-RAY EXAMINATIONS

The rationale for obtaining routine chest radiographs of patients admitted to hospitals is to discover unsuspected disease which might directly threaten the health of the patient and/or jeopardize the health of those coming in contact with the patient. However, available literature suggests that the yield of clinically significant information (not available from history, physical examination, or previous diagnostic testing) from such routine screening chest radiographs is low.

It is therefore recommended that routine chest radiographs not be required *solely* because of hospital admission.

IV. REFERRAL CRITERIA STATEMENT FOR CHEST X-RAY EXAMINATIONS FOR TUBERCULOSIS DETECTION AND CONTROL

A chest x-ray examination should always be obtained whenever a specific medical indication exists (e.g. relevant history, symptoms and/or significant tuberculin skin test reaction). However, there are several situations where x-ray examinations have traditionally been performed solely because of administrative mandate or protocol. The yield of tuberculosis cases found by screening or repeated chest x-ray examinations has not been shown to be of sufficient clinical value or productivity to justify the inconvenience to the subject, the monetary cost or added radiation exposure.

A. Chest X-ray Examinations for Employment

Mandated chest x-ray examinations, as a condition of initial or continued employment, have not been shown to be of sufficient productivity to justify their continued use for tuberculosis detection.

B. Chest X-ray Examinations in Long-Term Facilities

Because conventional tuberculin skin testing may not be a reliable screening method in older and/or chronically ill persons and because these individuals may be at high risk of having tuberculosis, the results of a recent chest x-ray examination should be obtained by the facility. Only if unavailable, a chest x-ray examination should be performed on admission. In the absence of clinical symptoms, repeated chest x-ray examinations have not been shown to be of sufficient clinical value or productivity to justify their continued use.

C. Repeated Chest X-Ray Examinations of Tuberculin Reactors

After initial evaluation, which should include a chest x-ray examination, repeated chest x-ray examinations of individuals with significant tuberculin reactions, (without current disease), whether or not they have been treated with isoniazid, have not been shown to be of sufficient clinical value to justify their continued use.

D. Routine Follow-up of Tuberculosis Patients Who Have Completed Treatment

Repeated chest x-ray examinations of asymptomatic tuberculosis patients who have completed treatment have been shown to be of insufficient clinical value or productivity to justify their continued use.

E. Routine Periodic Chest X-ray Examinations During Tuberculosis Treatment

Radiographic stability does not necessarily indicate success or failure of chemotherapy as reliably as the results of sputum smear and culture and assessment of symptoms and clinical status. However, an occasional x-ray examination may have value in confirming bacteriologic and clinical findings and enhancing patient compliance.

V. REFERRAL CRITERIA STATEMENT FOR CHEST X-RAY EXAMINATIONS IN OCCUPATIONAL MEDICINE.

A. Preplacement Examinations for Appropriate Job Placement

Preplacement chest x-ray examinations should be done selectively based on pertinent factors in the (1) occupational and medical history, (2) clinical examinations and (3) proposed work assignment.

B. Job Exposure Surveillance

Chest x-ray surveillance of persons who work with or may be exposed to substances that adversely affect pulmonary function or cause pulmonary disease should be based on periodicity consistent with the current understanding of the disease process.

C. Periodic Examinations Unrelated To Job Exposure

The yield of unsuspected disease (e.g., lung cancer, heart disease, and tuberculosis) found by periodic chest x-ray examinations of unselected populations, not based on history, physical examination, or specific diagnostic testing has been shown to be of insufficient clinical value to justify the monetary cost, added radiation exposure and subject inconvenience of the examination. It is therefore recommended that such routine examinations be discontinued.

The above statements do not preclude chest

x-ray examinations based on individual history, physical examination or specific diagnostic testing or in selected patient populations in which a significant yield has been previously substantiated or is considered highly likely pending appropriate substantiation.

I hope you find the above information helpful in establishing your policies regarding chest x-ray examinations in the medical community.

Sincerely,

Sidney D. Heidersdorf
Radiological Physicist
Department of Health & Social Services
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50,000 people will be saved from colorectal cancer this year. You can save one.

Save yourself! Colorectal cancer is the second leading cause of cancer deaths after lung cancer. More than 90% of colorectal cancers occur equally in men and women past age 50. Early detection provides the best hope of cure. That's why if you're over 50, you should take this simple, easy Stool Blood Test every year. The test kit is chemically treated to detect hidden blood in the stool and can be done at the time of your periodic health examination so your doctor will know the results.

Two days before the test, you begin a diet you might enjoy all the time. Plenty of fresh vegetables raw or cooked, especially corn, spinach and lettuce. Lots of plums, grapes, apples and prunes, moderate amounts of peanuts and popcorn. No red meat, turnips or horseradish. Do's and don't's are listed in the kit.

The presence of hidden blood usually indicates some problem in the stomach or bowel, not necessarily cancer. Positive tests must be followed by further testing to find out what the problem is.

Other tests for colorectal cancer you should talk to your doctor about: Digital rectal exam (after age 40); the procto test (after age 50). It is important to report any personal or family history of intestinal polyps or ulcerative colitis, and any change in your bowel habits, which could be a cancer warning signal.

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Kaimen Norman Ng

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ASMA AUXILIARY NEWS

Haines Physician Spouse Starts Infant Seat Loaner Program

Pat Jones, wife of Stan Jones, Haines physician, was the impetus for starting an Infant Seat Loaner Program in Haines. Pat, as President of the Haines Women's Club and with their support, began the program in December. The program started with 10 seats which were supplied with funds from the State Highway and Safety Planning Agency. In September, Pat attended a State Safety Workshop in which PECABU was featured and after which the Haines program is patterned. Congratulations to Pat and The Women's Club for all their efforts.

Anchorage Medical Society Auxiliary Announces Management Change for PECABU

The Anchorage Medical Society Auxiliary is pleased to announce that Providence Hospital and Humana Hospital Alaska have agreed to assume the continuing responsibility of PECABU, the Infant Seat Loaner Program belonging to the Auxiliary. The changeover in management of PECABU (Protect Every Child And Buckle Up) took place on January 1st. The Medical Auxiliary began this valuable community service as their 1983 Health Project. The Auxiliary is proud of the work that has been accomplished with PECABU, the lives it has saved and the community need it has filled. Cooperative efforts and support on the part of both hospitals since the beginning of PECABU, has made for a smooth transition and the continuing availablity of infant seats on loan to parents of the Anchorage community.

PECABU has become the largest infant seat loaner program in the U.S. with 1600 infant seats purchased. Over 2500 parents have rented seats since PECABU opened.

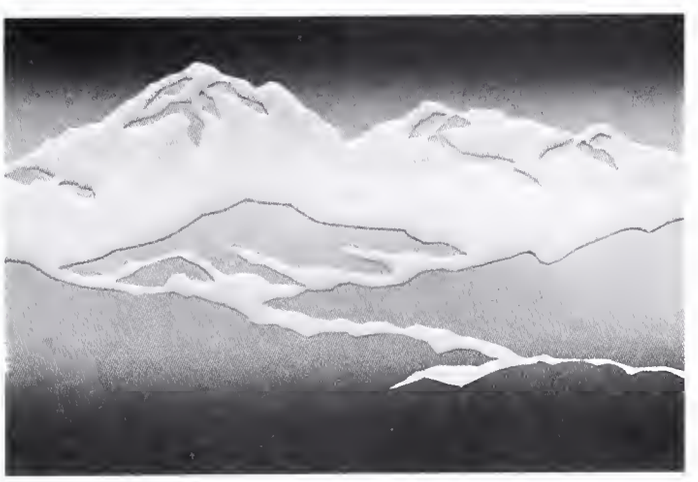
PECABU was 9 months in the planning and fund raising stage. Garage sales, dinners, and private donations started the program with 500 seats. These 500 seats were rented out in 3 months. Corporate donations from ARCO and more recently The Public Employees Association of Alaska enabled the program to continue. Invaluable support came from Alaska Airlines who donated all shipping costs from California to Anchorage for the first year of the program. PECABU was awarded a grant from the Municipality of Anchorage through the Department of Public Safety for $15,000 which purchased the last 500 seats.

After 6 months of operation, PECABU was awarded first place in the National Highway Traffic Safety Council's Safety Belt and Child Safety Seat educational program contest. Following that award, the Auxiliary received Honorable Mention at the Anchorage 1984 AAVA/Sohio Awards Breakfast for their work with PECABU. The PECABU program and method of operation has been featured in numerous workshops, most recently the State Highway Planning Agency Safety Seat Workshop in which several Auxiliary members were featured as keynote speakers. PECABU has been the impetus for 5 new loaner programs across the state. PECABU's success and representative participation in the Alaska Child Passenger Safety Association aided in the passage of Alaska State Safety Seat law.

A special and very proud thank you goes to every dedicated Auxiliary member who helped in any way to give PECABU its tremendous beginning. Almost 50 physician spouses have been involved in the program during its brief history. I encourage you to continue your support of the hospital program. Both hospitals definitely need volunteers. When celebrating its first year birthday, an editorial in the Daily News commented: "Few programs can boast this kind of community response in one short year. The auxiliary deserves warm community thanks for seeing such an important need and taking the steps to fill it." Congratulations to all of you for helping to improve the quality of life in Anchorage.

New Wieland Print is Auxiliary Fund Raiser

"Night Flight", a new print by Alaskan artist Marianne Wieland is the 1985 Fund Raiser sponsored by the Anchorage Medical Society Auxiliary. In November, an elegant desert and champagne party was hosted by Dr. and Mrs. Tryon Wieland at their home to introduce the print to the Auxiliary. The limited edition print is available exclusively through the Auxiliary. The print (10 by 12 inches)



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Your Name: _____ Spouse's Name: _____

Address: _____ Number of Children: _____

Phone: _____ Male: _____ Female: _____

Nationality: _____ Place and Date of Birth: _____

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Has it been a continuous residence? _____ If not, where else have you been and when? _____

Arrival point in Alaska: _____

Where are you now? _____

Why did you come to Alaska? _____

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What kind of medicine are you practicing now? _____

What facilities are you working with? _____

If different than when you first came to Alaska, please explain _____

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Do you have any experiences or lively stories you would be willing to share related to medicine? Briefly narrate, dictate and we'll translate; or call us on the phone.

Would you be willing to be interviewed further? _____

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Do you mind if this information is used

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Do you have any photographs that we could copy or that you would be willing to give us? _____

Please include below the name and address of any physician who has left the state who should be included or mentioned in this study: _____

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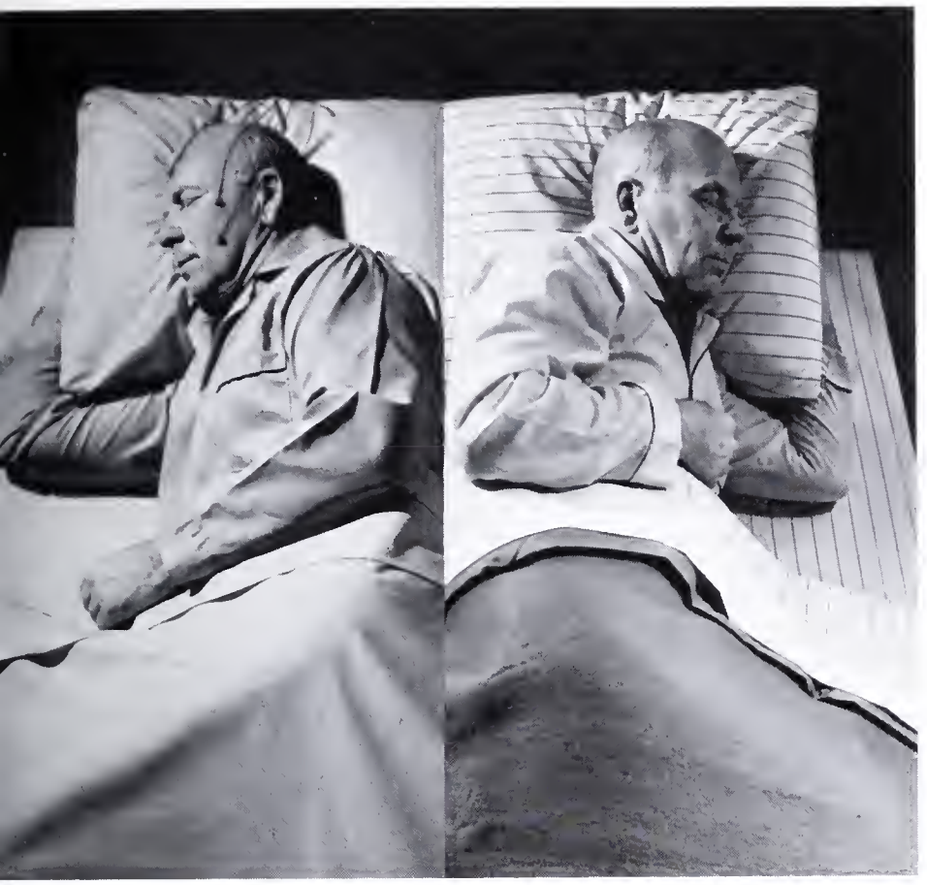

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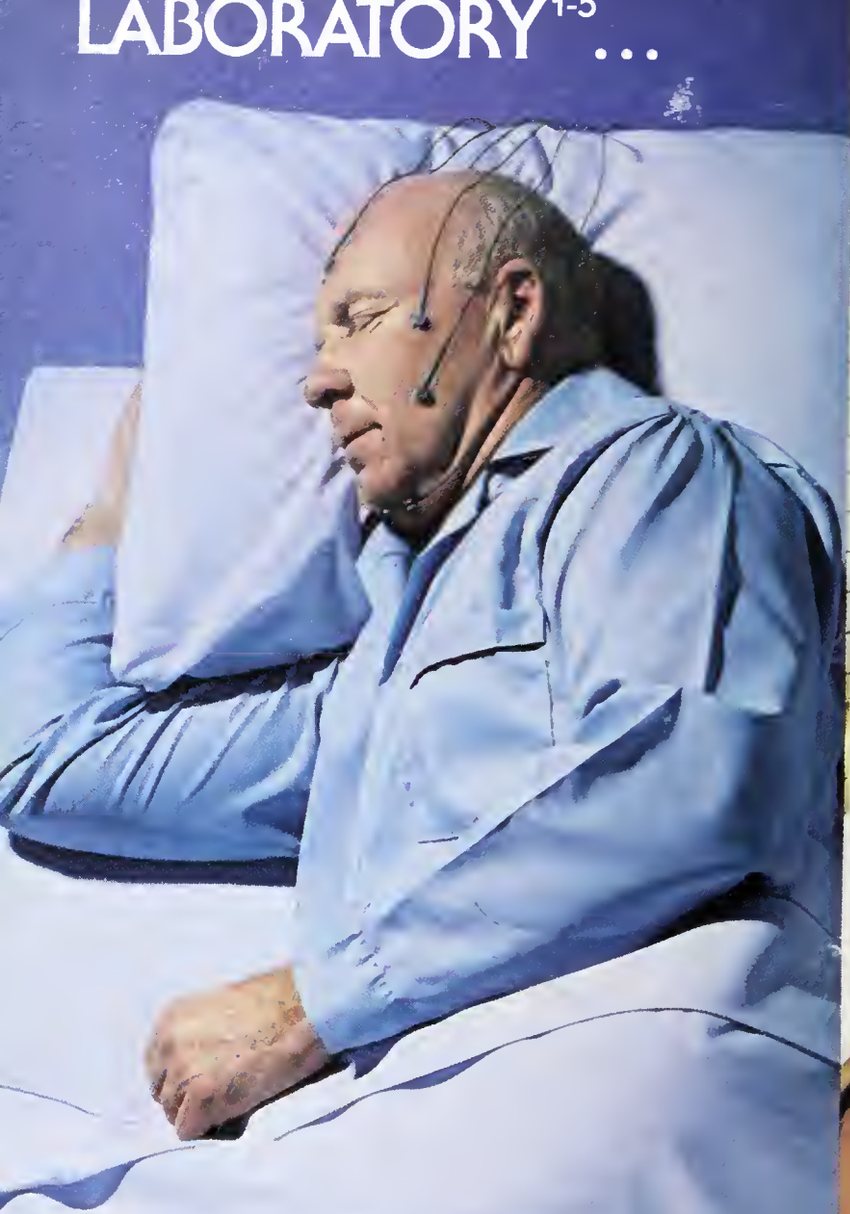

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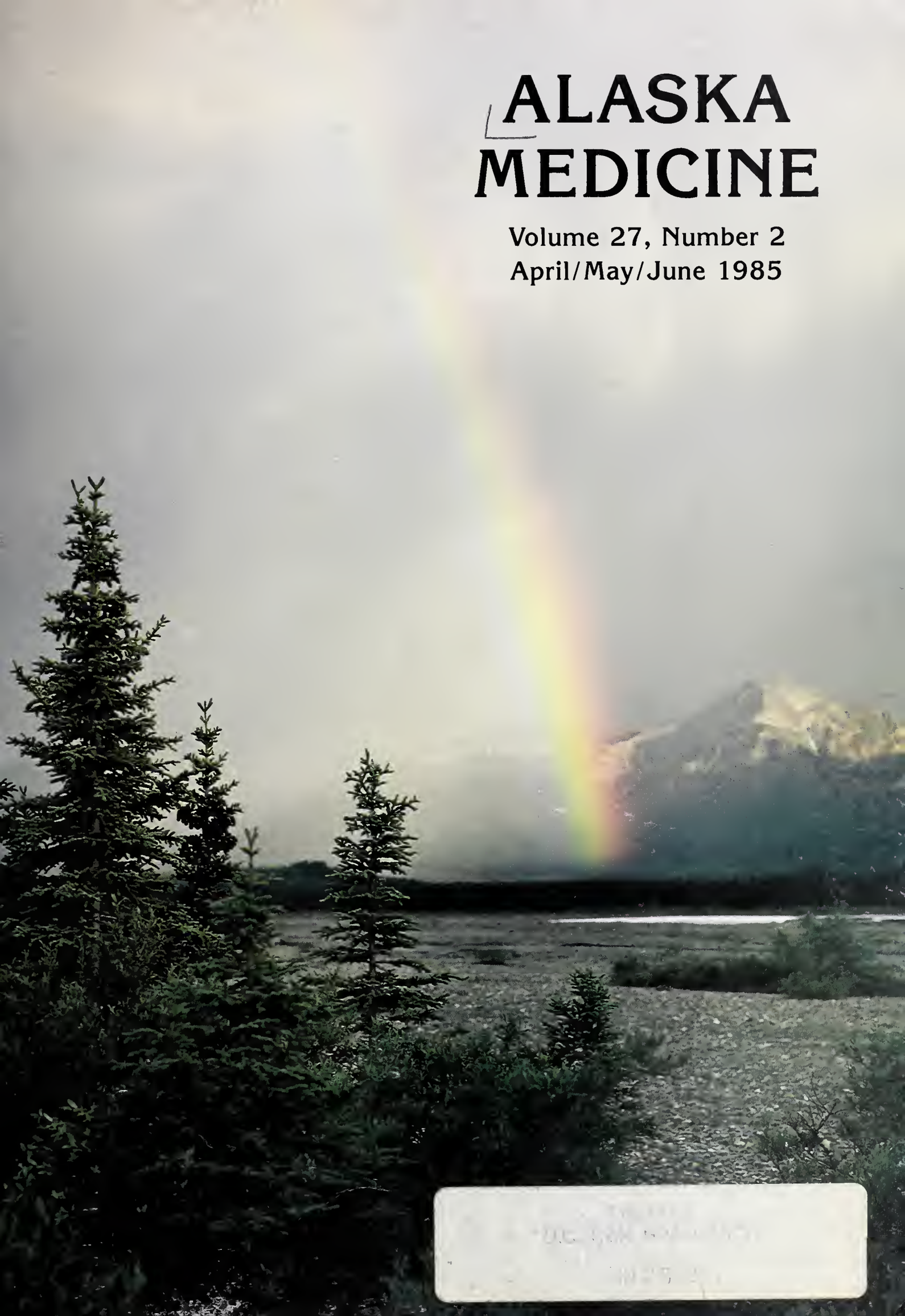
April/May/June 1985



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ALASKA MEDICINE

Official Journal of the Alaska State Medical Association

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Volume 27 | April/May/June 1985 | Number 2

ORIGINAL ARTICLES:

Periampullary Disease and Pancreatoduodenectomy
John Snyder M.D. 19

Kawasaki Disease in an Alaskan Eskimo Child
Kathleen E. Toomey, M.D., MPH, Thomas Kosatsky, M.D. 28

The Impacts of Alternative Funding Policies for Ambulatory Care Services on Hospitalization in the Indian Health Service Contract Health Care Program in Cordova, Alaska
Gregg Brelsford 31

FEATURES:

Alaska Medicine Essay:
Introduction
Douglas G. Smith, M.D. 36

Uninsured Doctors
James N. Penrod, Esq 36

AMA Delegate Report
Richard Witt, M.D. 42

Post Graduate Courses 46

Letter to the Editor
Milo H. Fritz, M.D. 47

Auxiliary News
Lorrie Horning 49

Alaska Medicine Vol 26, 1984 Subject Index 51

Alaska Medicine Vol 26, 1984 Author Index 52

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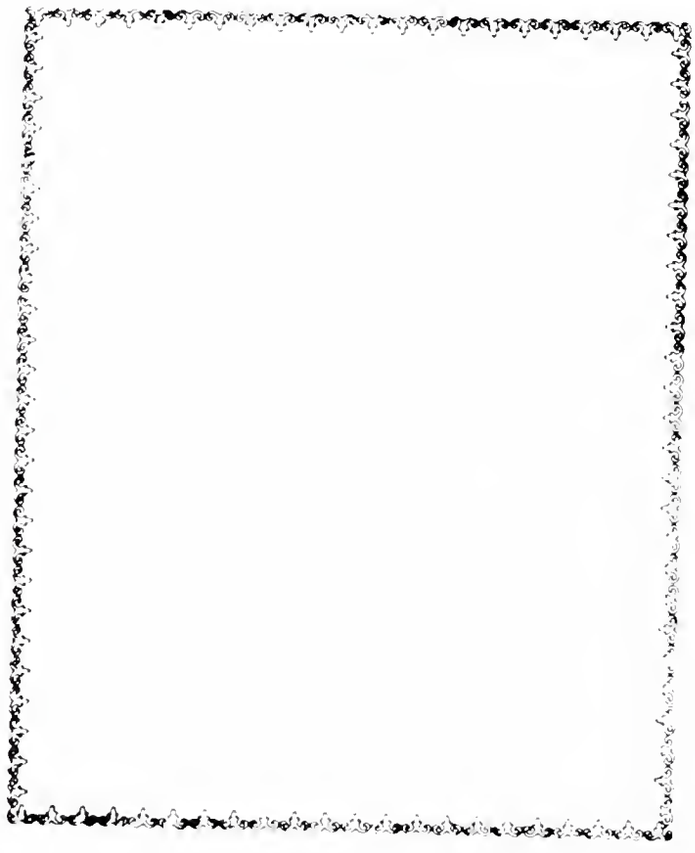

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PERIAMPULLARY DISEASE AND PANCREATODUODENECTOMY

John Snyder, MD

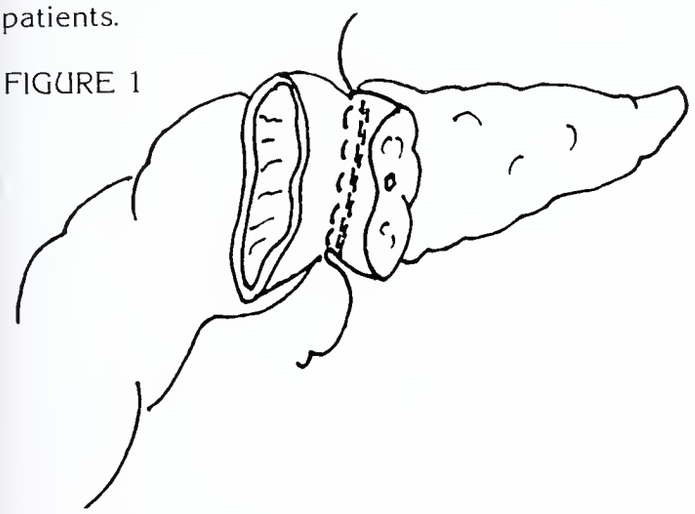
Abstract

The stimulus for this paper was four cases of periampullary disease that illustrate the indications for pancreatoduodenectomy. The four cases are presented and the prognosis of periampullary carcinoma reviewed; some controversial aspects of the Whipple procedure are discussed and technical preferences are described.

Introduction

The dismal cure rate for carcinoma of the head of the pancreas has led some to recommend abandonment of pancreatoduodenectomy as a curative operation for the desease (1,2). The concept erroneously assumes that accurate diffenentiation of the site of origin of periampullary carcinoma is always possible. Adoption of this principal by abdominal surgeons could lead to deliberate avoidance of the operation in occasional curable patients.

FIGURE 1



An outer layer of 3-0 prolene is started posteriorly in a running fashion.

The following case reports exemplify some of the diagnostic managerial difficulties and serve as examples of indications for the Whipple procedure.

Case 1:

R.A., a 35 year old white male, presented with a six month history of epigastric abdominal distress, early satiety, and bloating postprandially unresponsive to cimetidine. Upper gastrointestinal endoscopy revealed a friable 4-5 cm mass in the second portion of the duodenum which histologically proved to be adenocarcinoma. At laparotomy the patient had no evidence of lymph node metastasis or distal spread. A Whipple procedure was performed. Because of a small caliber common duct, a cholecystojejunostomy was performed, the distal pancreas was invaginated into a Roux-en-Y jejunal limb leaving the small sized pancreatic duct open without stenting. The surgery required 3½ hours of operative time with a blood loss of 1,000 cc.

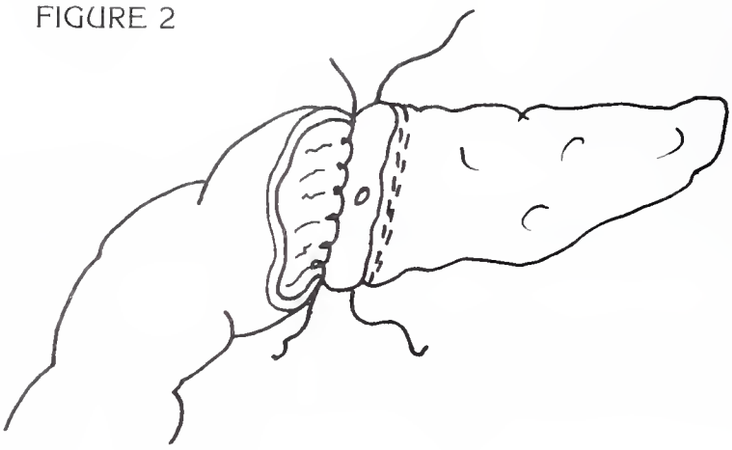
Postoperatively the patient developed a pancreatic fistula and a subsequent bile fistula both of which closed spontaneously. The patient was discharged from the hospital on the eighth postoperative day and has remained well without steatorrhea or need for pancreatic enzyme replacement.

Final pathological evaluation revealed Stage I disease with penetration of the cancer into the submucosa of the duodenum.

Case 2:

C.L., a 46 year old white male presented with painless progressive jaundice of three to four weeks duration. There was no past history of

FIGURE 2

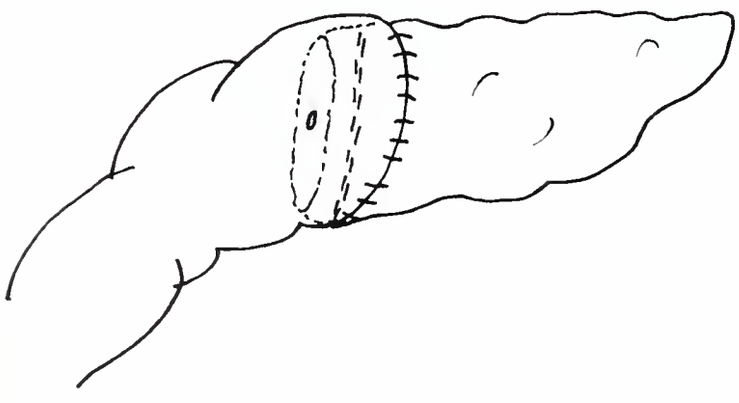


The second layer of running 3-0 prolene joins the full thickness of the cut jejunum to the transsected pancreas.

pancreatitis and the patient used no alcohol. Laboratory data revealed a pattern of obstructive jaundice. A sonogram showed no evidence of cholelithiasis and a CT scan failed to reveal any pancreatic mass. Attempted ERCP was unsuccessful.

Exploratory laparatomy demonstrated a totally occluded distal common duct with sharp "cut off" in the retroduodenal portion of the duct. Attempted biopsy by curettage was not diagnostic. A Whipple procedure and choledochojejunostomy was performed with ligation of the pancreatic duct by the TA-55 stapling device. The distal pancreas was invaginated into a Roux-en-Y jejunal limb. The operative time was 5½ hours with a blood loss of 1000 cc.

FIGURE 3



The posterior outer layer is continued anteriorly completing the anastomosis.

The patient was re-explored for post-operative bleeding which originated from a small artery at the site of the vagotomy. He was discharged from the hospital on the tenth post-operative day and remains well without need for pancreatic enzyme replacement or evidence of steatorrhea.

The final pathological diagnosis was benign stricture of the common bile duct without evidence of malignancy. Pancreatitis was not present in the pathological specimen.

Case 3:

J.L., a 69 year old white male presented with a three week history of pruritus and janudice without abdominal pain and without a history of alcohol consumption. Liver function tests revealed an obstructive pattern, a CT scan demonstrated no evidence of pancreatic mass and upper gastrointestinal endoscopy failed to reveal duodenal mucosal changes or abnormalities of the ampulla. Attempted ERCP was unsuccessful because the patient developed a hypotensive episode before the common bile duct could be visualized. A pancreatogram demonstrated a dilated main duct without malignant characteristics.

At exploration there was minimal induration of the head of the pancreas with a normal body and tail. Operative cholangiograms demonstrated circumferential narrowing of the distal common duct, choledochoscopy failed to show intraductal lesions. A duodenotomy was performed and a 3-4 mm polypoid lesion adjacent to the ampulla was diagnosed as adenocarcinoma on frozen section. No evidence of lymph node metastasis was present and a Whipple procedure was performed. The distal pancreas was stapled and invaginated into a Roux-en-Y jejunal limb. The operation required 5½ hours and blood loss was 1500 cc.

The postoperative course was benign and the patient was discharged on the twelth postoperative day.

The final pathological diagnosis was carcinoma of the head of the pancreas without lymph node metastasis. The patient remains well eight months after his surgery without evidence of pancreatic insufficiency and does not require pancreatic enzyme replacement.

Case 4:

L.P., a 54 year old white male with painless progressive jaundice was found to have an exfoliative adenocarcinoma of the ampulla of Vater on biopsy by upper GI endoscopy. CT scan revealed no masses in the head of the pancreas and no evidence of lymph-adenopathy. The patient underwent a pancreatoduodenectomy. The distal pancreas was stapled across and invaginated into a Roux-en-Y jejunal limb. Blood loss was 1000 cc. Operative time was 3½ hours. There were no post-operative complications other than prolonged

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efore prescribing, see complete prescribing information in SK&F CO. erature or *PDR*. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

ontraindications: Concomitant use with other potassium-sparing agents uch as spironolactone or amiloride. Further use in anuria, progressive enal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum otassium. Hypersensitivity to either component or other sulfonamide-erived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless ypokalemia develops or dietary intake of potassium is markedly impaired. f supplementary potassium is needed, potassium tablets should not be sed. Hyperkalemia can occur, and has been associated with cardiac irregu-arities. It is more likely in the severely ill, with urine volume less than ne liter/day, the elderly and diabetics with suspected or confirmed renal nsufficiency. Periodically, serum K^+ levels should be determined. If hyper-alemia develops, substitute a thiazide alone, restrict K^+ intake. **Asso-iated widened QRS complex or arrhythmia requires prompt additional herapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible azards, including fetal or neonatal jaundice, thrombocytopenia, other dverse reactions seen in adults. Thiazides appear and triamterene may ppear in breast milk. If their use is essential, the patient should stop ursing. Adequate information on use in children is not available. Sensitivity eactions may occur in patients with or without a history of allergy or ronchial asthma. Possible exacerbation or activation of systemic lupus rythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoreti-cally, a patient transferred from the single entities of Dyrenium (triamterene, SK&F CO.) and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydro-chlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjust-ments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in asso-ciation with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyper-glycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Cal-cium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function.

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Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermat-ological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneu-monitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

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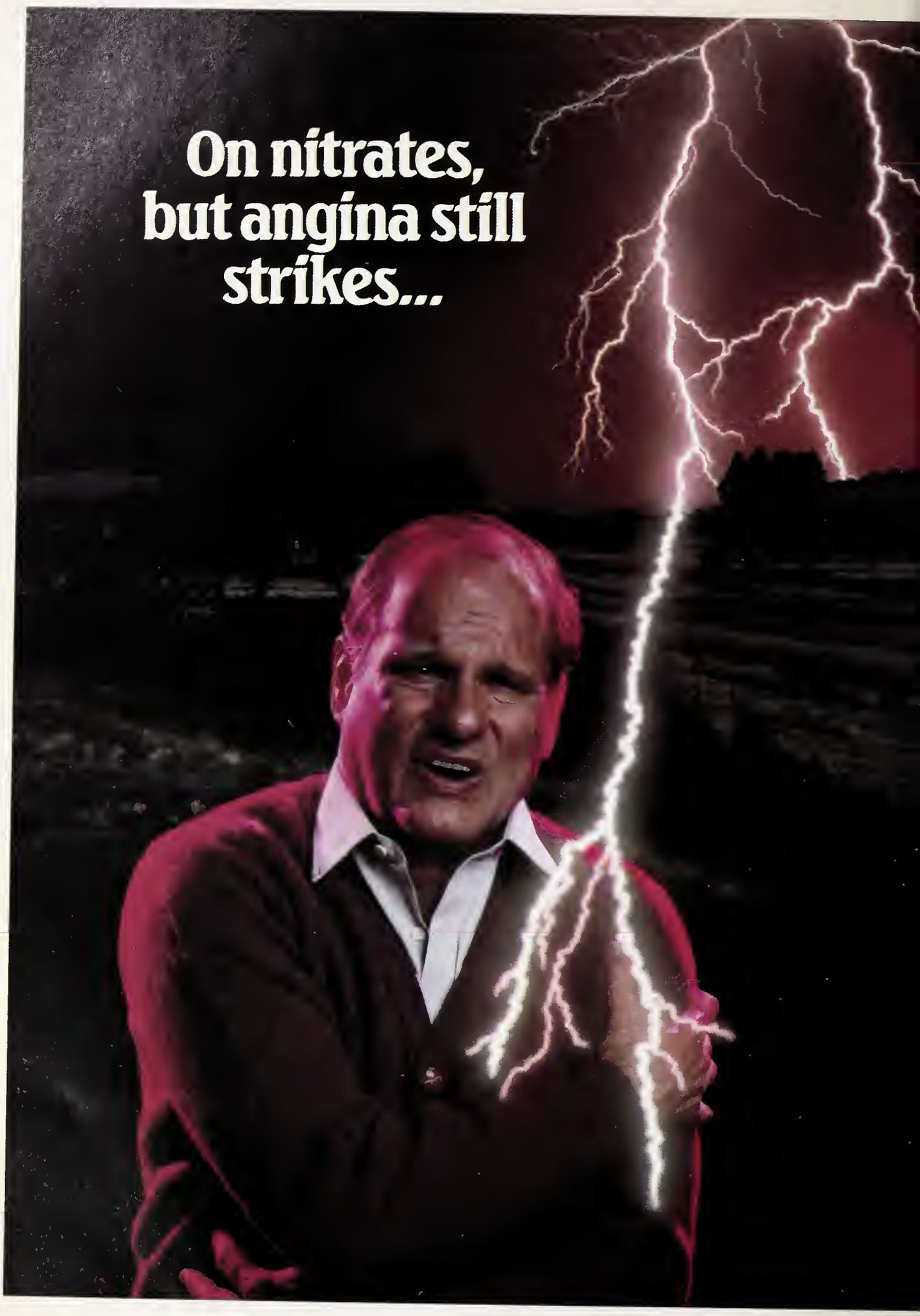
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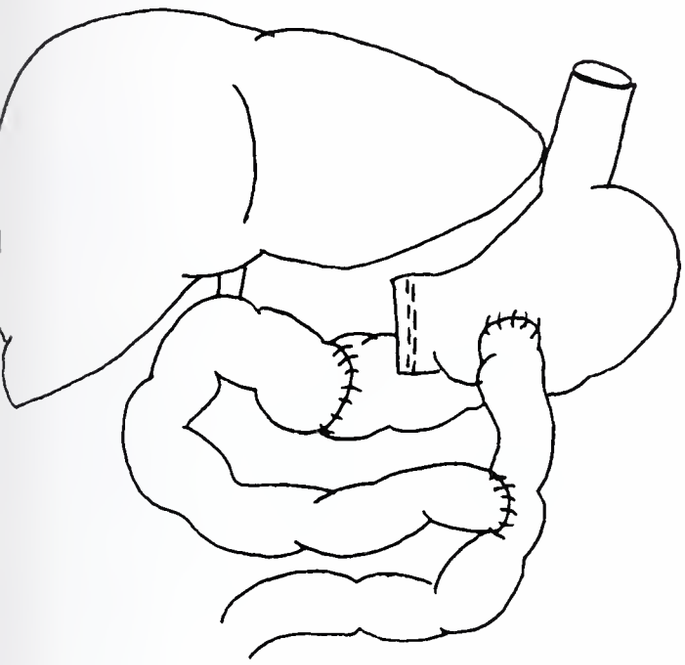
NG drainage. Drainage of lymphatic fluid from the right upper quadrant contained amylase in the normal serum range.

The patient remains well postoperatively and does not require enzymatic replacement on a normal diet.

The final pathological diagnosis was adenocarcinoma of the ampulla of Vater without lymph node metastasis.

FIGURE 4



The completed reconstruction using a Roux-en-Y limb.

Discussion:

Table 1 summarizes pancreatic head carcinoma from 1957 to 1984 in several collected series. Prior to 1957 there were only twelve known five year survivors of pancreatoduodenectomy for pancreatic head carcinoma. Added to the present series, there are approximately 102 known five year survivors in the reported English literature spanning a 30 year period. The cases represent a statistical 2 to 4% cure rate with an operative mortality of approximately 15%.

In contrast, Table 2 from the collected series of Brooks, and Table 3 from the most recent literature, reliably show that the five year cure rate in periampullary carcinoma is approximately 25-30%.

The favorable pathology in the above cases anticipates their survival and the minimal mortality reported supports the continued performance of pancreatoduodenectomy. It would be especially unfortunate to deny a patient with a favorable lesion such as cystadenocarcinoma of the pancreas, a chance for cure if adoption of the "bypass only" principle becomes universal.

The indications for pancreatoduodenectomy are carcinoma of the ampulla of Vater, carcinoma of the distal common bile duct, carcinoma of the duodenum and localized pancreatic head carcinomas without evidence of regional lymph node involvement. The potential difficulties of distinguishing the site of origin of periampullary cancer are exemplified by Case 3 in which there was minimal induration of the pancreatic head with a polypoid carcinoma near the ampulla. The assumption was made that the lesion represented extension of a small cancer originating within the ampulla. It is doubtful that random blind pancreatic biopsis would have been productive in this case. If a diagnosis of primary pancreatic cancer had been made and the "bypass only" philosophy for cancer of the pancreas followed, a potentially curable patient would have been lost.

Case 2 is representative of one of the most frustrating problems for an abdominal surgeon. What course of action should be followed when faced with the clinical criteria of malignancy but pathological certainty is lacking? A recent show of hands at a meeting of abdominal surgeons suggests only 25% of surgeons were willing to undertake a Whipple procedure without biopsy proof of carcinoma (18). Despite this majority feeling we do not insist on histologic evidence of malignancy prior to undertaking the procedure. It is impossible in some instances to obtain biopsy confirmation. Failing to perform the procedure would be a grave disservice to the patient.

Cottell in 1984 stated, "under most circumstances the diagnosis of carcinoma in this location cannot be established by biopsy" (19). Zintel makes the statement, "in less than one-third of a group of 25 consecutive patients were we able to have a difinitive histological diagnosis after exploring the abdomen and attempting to obtain a biopsy specimen of the mass" (9).

Fish and Cleveland agree with proceeding without definitive biopsy proof as do Longmire, Shires and Chile (13, 20,21,22). Shires points out that in a collective series of patients operated with a preoperative diagnosis of periampullary carcinoma and undergoing a pancreatoduodenectomy without biopsy confirmation, only 3% of patients had benign disease (21).

Some pathologists feel the frozen section diagnosis of pancreatic carcinoma can be accurately and reproducibly made even with skinny needle sampling. Kline reports 11 of 12 positive needle biopsies and Isaccson reports only one false negative case in 527 patients from 1960 to 1970 (23, 24). Most pathologists would agree with Schultz and Sanders that the accuracy of pancreatic biopsy is in the range of 65% (25). Probstein reports 18 of 28 false negative pancreatic biopsies with 11 subsequently dying of pancreatic cancer (26). Mikal's makes a plea for clinical correlation of the history and operative findings to

provide intraoperative guidance (27).

Case 3 is also interesting in that it appears to represent a spontaneous stricture of the common bile duct. Bile duct strictures in association with chronic pancreatitis, choledocholithiasis, trauma and related to inflammatory bowel disease are well known (28-36). The absense of any such associated disease in the patient suggests the etiology of spontaniety similar to the only other case reproted by Muscroft and Middleton in 1981 (37).

The area of greatest technical concern to the surgeon performing a pancreatoduodenectomy is the integrity of the pancreatojejuostomy. This has been widely held to be the potentially lethal part of the operation because of the threat of pancreatic fistula formation, associated hemorhage, and sepsis. Table 4 is a collected series of cases demonstrating an incidence of fistula formation of 16% and an associated mortality thought related to the fistula of 30% (38, 39).

Whipple's first case in 1935 had ligation of the pancreatic duct. Brunschwig in 1937 advocated the routine ligation of the pancreatic duct (40). The technique was rejected by Cottell because of the presumed necessity of pancreatic enzymes for normal digestive function. Several recent authors have renewed the interest in duct ligation on the basis that most duct-mucosal anastomoses become strictured or obliterated yet pancreatic insufficiency developes in only a small number of patients. Goldsmith from Sloan Kittering, reported 45 patients undergoing direct duct ligation compared with 34 patients having a duct to mucosal anastomosis and found no statistical difference for postoperative enzyme requirements (41). Young reported 3 patients having duct ligation and agrees with Goldsmith's findings (42). Longmire experimented with duct ligation in 4 patients and felt the incidence of fistula formation higher than with direct anastomosis and does not recommend the technique (43).

Howard performed experimental studies on dogs and demonstrated a variable degree of pancreatic atrophy after duct ligation and an unpredictable degree of steatorrhea which seemingly improved in 7 to 8 weeks. He postulates an increased production of intestinal lipase or a lymphatic mechanism from the pancreas to explain the improvement (44). Although increased gastrin production has been reported in dogs following pancreatic duct ligation and others suggest the development of late diabetes in experimental animals, clinical experience does not support the findings (43, 44, 45).

Invagination of the transected distal pancreas into a Roux-en-Y jejunal limb, with or without a plastic stent in the pancreatic duct has been reported by several authors (46, 47). The incidence of fistula formation is unchanged using the technique.

Donovan describes stapling across the distal pancreas in cases of traumatic transection of the pancreas but feels this offers no greater protection from fistula than does duct ligation (48).

Three of the 4 patients in this report and one previous patient who underwent a Whipple in 1976 for carcinoma of the ampulla of Vater had the distal pancreas stapled and the stump invaginated into a jejunal limb. None developed drainage of pancreatic fluid and none have required pancreatic enzyme replacement or manifest steatorrhea. This technique is illustrated in figure 1, 2 and 3. The preferred suture is 3-0 prolene. Howard has shown that catgut dissolves in pancreatic juice in 24-48 hours and that vicryl loses 30% of its strength in two weeks (49).

The method of reconstruction in figure 4 requires no more operative time than a loop gastrojejunostomy if the EEA stapler is used for both the gastrojejunostomy and the jejunojejunostomy. It is apparent that if the diagnosis can be ascertained prior to laparotomy approximately 2 hours of surgery can be avoided.

One final technical aspect of note is the incision. Most authors recommend a midline or bilateral subcostal for the operation. We find that the best access to the right upper quadrant organs is a "trap door" or Czerny incision (50, 51). Najarian has described the incision to be useful in liver transplantations (18). Once resectability is determined, the upper midline incision is extended from its inferior end directly to the lateral border of the rectus or further if need be, dividing the muscle with the bovie, This is especially useful in the obese patient. No problems with healing have been encountered.

Brooks suggested in 1966, that total pancreatectomy should be the operation of choice for carcinoma of the pancreas, based on the observation that 30-40% of patients undergoing a Whipple procedure for carcinoma of the pancreas had residual tumor in the distal pancreas (51). In a follow-up article in 1979 evaluating 25 patients who underwent total pancreatectomy he demonstrated 37% would not have had all tumor resected by a standard Whipple procedure. The operative mortality was 12% and the two year survival was 32%. Interestingly, 4 patients survived longer than 5 years, 2 of whom died of recurrent disease (53).

Sanderberg of Sweden reports total pancreatectomy has been the procedure of choice at their institution and an operative mortality of 21% with a 5% five year survival (52).

The side effects of total pancreatectomy are discussed in an article from the Mayo Clinic published in 1975 and emphasized that diabetes is not as severe as previously suggested. Steatorrhea is a problem in only 25% of patients. Thirty percent of patients have significant weight loss and only 4% develope significant dumping (53).

A total pancreatectomy is indicated when deal-

ing with a diffuse pancreatic head carcinoma in which the distal extent of the tumor cannot be well defined and in which no evidence of metastasis beyond the confines of the pancreas can be identified. Any pancreatic carcinoma not meeting these criteria should be simply bypassed for palliation.

A few authors report palliative pancreatectomies but Shapiro has shown the differences between a palliative Whipple and bypass in regards to months of survival, repeat hospitalization and second operation are not statistically different (2). Crile feels the survival is shorter following a palliative Whipple.

If the surgeon choses to bypass the biliary tract a gastrojejunostomy should also be performed. Monge, of the Duluth Clinic, reported gastric outlet obstruction in 6 of 14 patients who did not undergo gastrojejunostomy (54). Basse, Keehan and du Plessis also advocate the so-called double bypass (55, 56, 57). A vagotomy is recommended by du Plessis.

Coffey disagrees, finding an incidence of outlet obstruction of 11% and argues that a second procedure to alleviate obstruction should it develop carries no greater mortality or morbidity than simultaneouis gastrojejunostomy (58). His reported 15% increased mortality when gastrojejunostomy is added to biliary bypass is extremely high. Subjecting terminally ill patients to a second operative procedure would seemingly diminish their remaining quality of life.

A recent report form the Lahey Clinic has advocated the preservation of the stomach and pylorus during pancreatoduodenectomy in an attempt to improve postoperative nutrition and avoid the side effects of vagotomy and partial gastrectomy. They cite Longmire and Travesso as originators of the procedure in 1976 (59). It should be noted in Travesso's discussion of the paper that the modification was not originally intended to be used in cancer patients, although he admits they have subsequently used it in such cases.

A review of the anatomical relationships of the gastroduodenal artery and its very short origin from the right gastric which must be preserved in the modification suggests that preserving the pylorus violates the concept of en bloc resection in most instances and should therefore be avoided. Their stated benefit of decreased operating time is negligible if stapled anastomoses are performed. As noted by the Mayo Clinic an incidence of dumping of only 4% with a total pancreatectomy would hardly justify compromise of a cancer operation.

Summary

Adenocarcinoma of the head of the pancreas is curable in only 2-5% of cases by pancreatoduodenectomy. The 5 year survival for other periampullary cancers treated by the Whipple operation is approximately 25-30%, comparing favorably with other GI malignancies such as carcinoma of the gallbladder and proximal bile ducts.

Differentiation of the site of origin of periampullary cancer is frequently impossible and in approximately 30% of cases a definite pathological diagnosis of malignancy cannot be rendered prior to performing a pancreatoduodenecotmy.

A total pancreatectomy should be considered in those patients in whom the distal pancreatic extension of cancer cannot be accurately identified. Operations that violate en bloc cancer principles appear unjustified and unnecessary and are not recommended.

Ligation or stapling of the pancreatic duct with invagination of the transected distal pancreas into a Roux-en-Y limb of jejunum appears to offer added protection against pancreatic fistula and is not associated with any greater incidence of exocrine dysfunction than attempted direct anastomosis.

TABLE 1

Five year survivors of Pancreatoduodenectomy for Carcinoma of the Head of the Pancreas

Author	Year	Total Op #	Number of Cases	Mortality%	5 years of Survival%
Rhoads(9)	1957	?	12	--	--
Baden(12)	1978	1961	43	18.5	2
Brooks(3)	1983	1005	41	20.0	4
Collected Series*	1984	215	6	14.0	3

*4-6, 8,10, 11, 13

TABLE 2

Five-Year Survival After Whipple Procedure for Ampullary and Lower Common Duct Carcinoma

Author	Year	Number of Patients	Operative Mortality%	3-Year Survival Rate%	5-Year Survival Rate%
Fish and Cleveland (collected series)	1964	1169	19.9	*	*
Fish and Cleveland	1964	38	23.7	10.3	3.4
Buckwalter et al.	1964	51+	22.6	*	*
Jordan	1964	28	21.4	40.0	35.7
Judd	1964	28	21.4	*	*
Monge' et al.	1964	120	17.5	48.1	35.3
Monge' et al.	1964	37	10.8	*	27.3
Moody and Thorbjarnarson	1964	24	25.0	61.1	33.3
Child and Frey	1966	21	33.3	*	25.0
Longmire and Shafey	1966	13	15.4	36.4	27.3
Maki et al.	1966	42	31.0	*	*
Sako	1966	11	0.0	27.3	27.3
Salmon	1966	35	16.0	48.3	37.9
Warren et al.	1967	156	14.7	*	32.6
Howard	1968	14	0.0	*	*
Sato et al.	1968	48	29.2	*	*
Beall et al.	1970	14	21.4	*	9.1
Crile et al.	1970	29	20.0	*	13.0
Ponka and Uthappa	1971	11	0.0	*	36.4
Denker	1972	39	28.0	27.0	23.0
Lansing et al.	1972	22	45.5	*	41.6
Baker et al.	1973	15	26.7	45.5	36.4
Crane et al.	1973	26	23.0	*	42.0
Gilsdorf and Spanos	1973	$88	23.0	*	17.4
Longmire	1973	26	13.8	*	33.2
Smith, R	1973	180	4.4	47.1	30.8
Aston and Longmire	1974	26	13.8	*	*
Gatti et al.	1974	11	27.3	*	37.5
Hoffman and Donegan	1974	14	14.3	*	54.0
Wilson and Block	1974	13	23.0	*	30.0
Wise et al.	1975	39	15.3	45.5	24.2
Combined data		2390	18.8	42.8	29.3

*Not stated in article.
+Includes head of pancreas

$These survival figures are corrected and include only those patients who survived the operation; reports of less that 10 cases are excluded.

TABLE 3

Carcinima Of The Ampulla Of Vater

Author	Year	#Cases	Mortality%	5-Year Survival%	
Fish (20)	1963	16	12.5	0	
Farmer (16)	1975	38	8	0	
Warren (7)	1975	67	11	32	
Countsoftides (11)	1975	8	0	36	
Baggenstoss (14)	1977	87	11.5	34	
Longmire (13)	1979	21	14	24	
Lindenauer (17)	1982	44	16	16	
Antinoi (6)	1982	36	15	28	
Copeland (15)	1983	27	2.3	20	
Lerut (4)	1983	29	10.6	50	
			10	24	TOTAL

Table 4

Incidence Of Pancreatic Fistula In Whipple Procedure

Author	#Cases	%Fistula	%Total Deaths from Fistula	
Nakase (5)	403	28	19	
Lerut(4)	103	19.5	55	
Matsuno (38)	66	12	0	
Herter (6)	33	27	7	
Warren (7)	335	8	13	
Copeland (15)	44	13.6	0	
Gray (39)	233	8.5	20	
		15.9	30	TOTAL

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KAWASAKI DISEASE IN AN ALASKAN ESKIMO CHILD

Kathleen E. Toomey, M.D., M.P.H.

Thomas Kosatsky, M.D.

Introduction

Kawasaki first described "Mucocutaneous Lymph Node Syndrome" (MLNS) in 1967 (1). At first thought to be confined to Japanese infants and children, the syndrome has since been noted throughout the world. Cases have been suspected in adults. Despite numerous published reports much is still obscure regarding the epidemiology of Kawasaki disease and no etiologic agent has been demonstrated. No specific laboratory tests exist for the identification of Kawasaki disease. The diagnosis rests on a case definition based on acute manifestation.

In January 1983, a four year old Eskimo child presented to the Kotzebue Public Health Service Hospital with an illness, the acute and chronic manifestations of which were compatible with Kawasaki disease. The purpose of this article is to present the first case noted in an Alaskan Eskimo, and to describe salient features of the disease and its complications.

Case Report

A four year old Kotzebue resident presented with a three day history of fever and fussiness. A generalized fine red rash was said to have developed on the second day of illness. On the third day he began to vomit, complain of abdominal pain and a sore throat. Siblings five years and 18 months old were not concurrently ill.

Physical examination revealed a temperature of 38.6°C, pulse of 140, and a respiratory rate of 32/min. The child had a raised, red morbilliform rash on the face and trunk. His lips were dry and cracked, but no abnormalities of the throat or oral cavity were otherwise noted. He was treated with acetaminophen and promethanzine suppositories.

On the seventh day he was listless, irritable, and anorexic. His temperature was 38.6°C. His fingertips showed a fine desquamation. There were no palpable lymph nodes and no pulmonary or cardiac abnormalities. A throat culture was negative for streptococci. Urinalysis revealed trace proteinuria with occasional polymorphs; urine culture was negative. Acetyl salicylic acid (ASA) was given. On the eighth day his temperature was 36.6°C. Constitutional symptoms persisted. His liver was palpated 3 cm below the right costal margin; his spleen was not felt. A blood count showed: hematocrit 33%, hemoglobin 11.2 g/dl, 14,200 white blood cells/cc with 64% polymorphs, 3% bands, and 14% eosinophils. His serum alkaline phosphatase was 468 International Units (4.5 fold elevation) and SGOT was 38 International Units (2 fold elevation). On the 11th day a platelet count was 900,000/cc and the sedimentation rate was 52 mm/h. A history of conjunctivitis early in the course of his illness was offered by the parents. Kawasaki disease was diagnosed and ASA was increased to a dose of 80 mg/kg/day.

On the 13th day of illness the child's temperature was 37.6°C. An electrocardiogram showed sinus tachycardia and chest radiogram demonstrated borderline cardiomegaly. On the 18th day a systolic murmur was heard at the left sternal border. Hepatomegaly was again noted and a spleen tip was felt.

On the 26th day the patient complained of left anterior chest pain. This persisted for three days. Electrocardiogram revealed non-specific ST and T wave changes. On the 30th day of illness ASA was decreased to 20 mg/kg/day; it was stopped on the 75th day.

On the 96th day the patient presented with fever,

abdomonal pain, tachycardia, and hepatomegaly without abnormal laboratory findings. Therapy with ASA was restarted at 80 mg/kg/day. It was finally stopped three weeks later.

Eight months after the initial presentation an echocardiogram revealed normal chamber size, normal valvular morphology and normal coronary arteries. The child is well 18 months after presentation with normal growth and development.

Discussion

The diagnosis of Kawasaki disease is based soley on clinical criteria. These criteria were established by the Research Committee on Mucocutaneous Lymph Node Syndrome of Japan and adopted by the Center for Disease Control (see Table 1) (2). These criteria have recently been reviewed by Black et al. and Fulginiti et al. (3, 4).

Observations of clinical criteria made in the case presented are consistent with Japanese/CDC definitions of MLNS. While onset of fever was abrupt, temperature was not recorded above 38.5°C. It lasted for at least 10 days and was unaffected by antibiotics or antipyretics. Conjunctivitis was observed by the patient's parents but not by medical personnel. Although the patient complained of sore throat, no pharynegeal abnormalities were seen. Crusted and fissured lips were seen on the third day of illness but the strawberry tongue was not noted. Neither erythema nor indurative edema was observed on the hands or feet. Generalized desquamation involving the finger tips and palms was observed on the seventh day. The rash of Kawasaki disease is variable in expression; the child's rash was morbiliform and generalized. Lymphadenopathy was not observed but it is least commonly found among the definitive characteristics of Kawasaki desease.

In addition to the diagnostic manifestations mentioned, the child demonstrated several of the described abnormal findings associated with Kawasaki desease. Among symptoms frequently reported (Table 1) he complained of listlessness, diarrhea, abdominal and precordial pain. Enlargement of the liver and spleen have been found in Kawasaki desease. Sterile pyuria as noted in this child is a common finding and has been associated with meatitis. Elevation of hepatic enzymes, a normochromic normocytic anemia, and an elevated platelet count are also frequent laboratory findings among patients with Kawasaki disease.

Most important among sequelae of Kawasaki disease is the development of coronary artery abnormalities. In Japan, 2% of patients with Kawasaki disease have died suddenly with heart failure. Cardiac abnormalities, such as arrhythmias, myocardial ischemia, and infarctions have been observed both during the acute phase and after apparent clinical recovery. Our patient had sinus tachycardia and cardiomegaly on the 13th day of illness and a systolic murmur on the 18th. Eight days later he complained of left chest pain. Recovery appeared to be complete when on the 96th day he presented with fever, abdominal pain, hepatomegaly, and a heart rate of 140.

Pharmacological therapy including corticosteriods, anticoagulants, and ASA have been evaluated in the therapy of Kawasaki disease (6). Currently, ASA is considered the treatment of choice based on the presence of widespread vasculitis and the implication that increased numbers of platelets and increased platelet aggregation may in some way be linked with cardiovascular sequelae. While the appropriate dosage of ASA is unknown, there appears to be agreement that therapy should be guided by blood level determinations. The child's initial illness and his apparent recurrence were treated with ASA.

Discussion with Alaskan pediatricians indicates that 12 other children have been diagnosed with Kawasaki disease between 1982 and 1985. We are aware of one other case among Eskimo children, one recently diagnosed this year. Teixeira et al. reported a case of Kawasaki disease in a 3 year old North American Indian girl in 1980 (7). A high incidence of Kawasaki disease has been reported by Melish et al. in Hawaii (8). Morens et al reported that the incidence of Kawasaki disease among Asian and Black American children was higher than among whites (9). While the occurrence of Kawasaki disease in an Eskimo child may be novel, it is not unexpected. Practitioners caring for Alaskan children should be sensitive to Kawasaki disease which may be easily confused with disorders sharing some of its many manifestations, some potentially devastating during the acute illness or apparent resolution.

TABLE 1
KAWASAKI DISEASE: PRINCIPAL DIAGNOSTIC CRITERIA (5)

Fever persisting for more than 5 days

Conjunctival infection

Changes in the mouth

- Erythema, fissuring, and crusting of lips
- Diffuse oropharyngeal erythema
- Strawberry tongue

Changes in the peripheral extermities

- Induration of hands and feet
- Erythema of palms and soles
- Desquamation of tips of fingers and toes approximately two weeks from onset of illness
- Erythematous rash

Enlarged lymph note mass greater than 1.5 cm in diameter

Associated manifestations
- Sterile Pyuria
- Arthralgia, Arthritis
- Diarrhea
- Abdominal Pain
- Aseptic Meningitis
- Carditis
- Hepatitis
- Obstructive Jaundice
- Hydrops of Gallbladder

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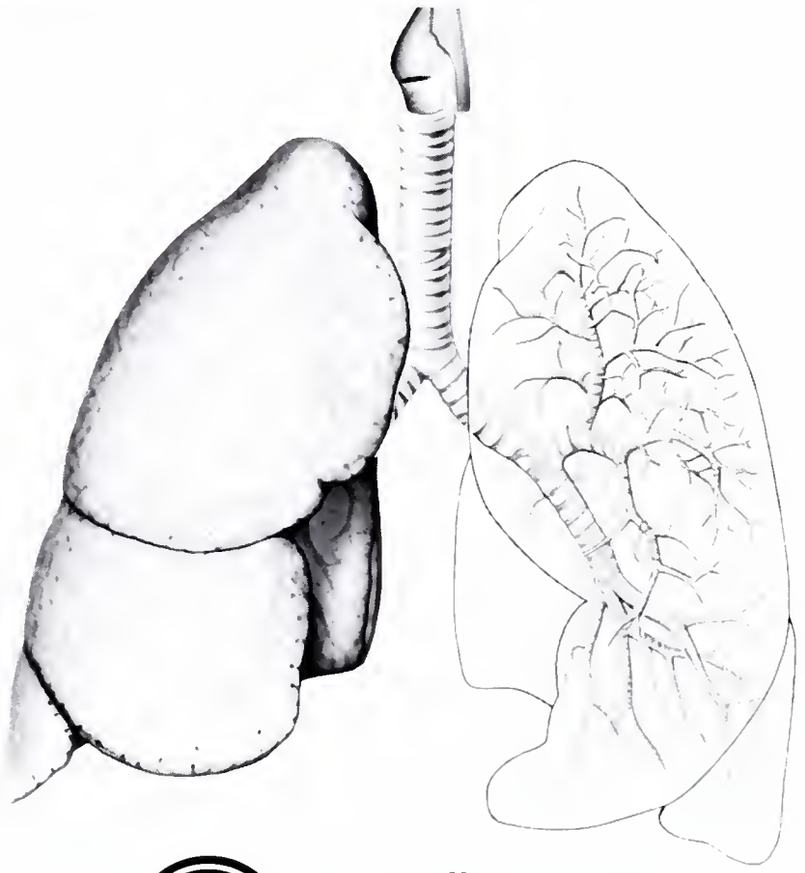

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Brief Summary Consult the package literature for prescribing information

Indications and Usage Ceclor* (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms

Lower respiratory infections including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae* and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions *General Precautions* — If an allergic reaction to Ceclor* (cefaclor, Lilly) occurs, the drug should be discontinued and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made, because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — *Pregnancy Category B* — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor* (cefaclor, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbiliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions, erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever, have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

Note Ceclor* (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Additional information available to the profession on request from Eli Lilly and Company Indianapolis, Indiana 46285

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40044*

THE IMPACTS OF ALTERNATIVE FUNDING POLICIES FOR AMBULATORY CARE SERVICES ON HOSPITALIZATION IN THE INDIAN HEALTH SERVICE CONTRACT HEALTH CARE PROGRAM IN CORDOVA, ALASKA

Gregg Brelsford*

Abstract

This study documents the impact of alternative funding policies for ambulatory care services on hospitalization in the Indian Health Service Program in Cordova, Alaska. A longitudinal comparison for 18 months of program performance under each of two policies from April, 1977 to March, 1980 was conducted. Under the enhanced ambulatory care policy both hospitalization and total program expenditures were significantly reduced.

Health care expenditures in the United States have increased dramatically in recent years. The $362 billion in public and private funds spent on health in 1983 exceeded federal outlays for defense by $150 billion. This is an increase of 762% over the $42 billion spent in 1965 (1). At the current rate of increase health care expenditures will be about one trillion dollars (2). This will amount to 20% of the country's gross national product compared to 4.4% in 1950 and 10.5% in 1982 (3).

Hospital costs comprise the largest single element of expenditures on health, making up about 42% of all money spent on health care. Cost increases in this sector have also been particularly rapid, rising at about 14% annually since 1970 (1). Accordingly, efforts to reduce expenditures made on health care have focused primarily on reducing expenditures made on hospitals.

There are two basic approaches to reducing expenditures made for hospital related health care. One is to attempt to limit increases in hospital costs. This approach includes governmental taxation and regulation strategies. The other approach is to attempt to reduce utilization of hospitals altogether. While both approaches are important, this paper will address the latter. The purpose of this paper is to describe and analyze the effort of public health officials to reduce public expenditures for health care in a small rural community in Alaska. The strategy was to reduce utilization of the hospital's inpatient services. This was to be accomplished by increasing the availability of ambulatory outpatient services. It was assumed that increased access to ambulatory health services would allow medical intervention at an early enough stage in the individual's illness to preclude the need for hospitalization, thereby reducing hospitalization related expenditures.

Numerous studies have been conducted on the effect of ambulatory health care on hospitalization (4-7). These have occurred at various times over the past twenty years in different settings and under varied experimental conditions. Freiberg has conducted a broad and cogent review of the literature

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in the area and appropriately concluded that they have produced "inconclusive results". Not only are the results inconclusive but the studies generally suffer a broad range of experimental deficiencies. Control experimental and / or comparison groups are not controlled for demographic characteristics such as age, sex, education or income. They are also not controlled for historical utilization rates. Without the latter one cannot address the relative impact of previoulsy uncovered illness on the results. Finally, these groups are also not controlled for variation among physicians and hospitals in philosophy and practice of medical care and hospitalization.

This study offers an unusual opportunity to address the experimental deficiencies identified above. It consists of a before and an after longitudinal comparison of hospital inpatient utilization rates in response to a discrete increase in the availability of ambulatory health services. The subject population is the same in both instances. It is also culturally distinct and homogeneous. Thus it is controlled for demographic characteristics. The source of health care were also constant throughout the study, thus controlling philosophy and practice of health care.

Background and Setting

The focus of this study is the public health program of the Indian Health Service (IHS) for Alaska Natives in Cordova, Alaska. The IHS is a federal agency within the Department of Health and Human Services. It provides comprehensive health services to American Indians and Alaska Natives in fulfillment of certain conditions of the special relationship between aboriginal peoples and the United States Government.

In the absence of IHS staffed and operated health facilities, the IHS contract with health care providers in local communities on a fee for service basis to provide medical services to eligible beneficiaries within thier vicinity. This is the case for Alaska Natives in the Cordova area. On a contractual basis the IHS provides pharmaceutical, dental, hospital inpatient, hospital outpatient (e.g. emergency room, laboratory and X-ray), and physician services in Cordova. This study deals exclusively with physician outpatient, hospital outpatient and hospital inpatient services.

Cordova is a coastal community, located on Prince William Sound in Southcentral Alaska. It is accessible only by boat or air and service is sporadic at best due to weather. There are approximately 3,000 people in Cordova of whom approximately 400 are Alaska Native. The health care resources in Cordova addressed in this paper include a 12 bed hosptial with inpatient and outpatient services and a private medical clinic with 3 physicians and 2 nurse practitioners. Also present but of minimal consequence to the study are an 8 bed nursing home, a mental health worker, an alcoholism counselor, a staff social worker and a state public health nurse.

As noted above health care is provided to Alaska Natives in the Cordova area by the IHS through contracts with local health care providers on a fee for service basis. The contract year is divided into two 12 equal monthly allocation of funds. When the monthly allocation is exhausted it may or may not be supplemented with a special allocation. In the absence of supplemental funds if a monthly allocation is exhausted prior to the end of the month, services to Alaska Natives through the program are suspended until the beginning of the new month and the activation of the funding allocation for the new month.

If IHS contract services are suspended due to exhaustion of funds, persons seeking routine medical care must pay for the services themselves. In the case of an emergency supplemental funds will be authorized, or the person will be flown by airplane to the IHS facility in Anchorage. Under no conditions are emergency services denied.

In September 1977, IHS tribal and hospital administrators met to review the operation of the IHS contract health program in Cordova under the existing policy which for comparison purposes will be labled Policy A. They discovered that contract physician and hospital outpatient funds were consistently exhausted by the middle of each month and that the average number of inpatient days per month (18.7) appeared inordinately high relative to the eligible population. The group concluded that current funding policies were not reasonably cost effective.

Policy B was therefore developed as an alternative to Policy A and reflected an adjustment of service priorities within currently available funds. With regard to the hospital contract the allowable services of the outpatient component were expanded to include alcohol and mental health crisis intervention. Additionally the perdiem rate for inpatient services was reduced. The funds expected to be saved due to the reduction were transferred to the physician's contract to increase the availability of their outpatient services. The result was a new funding policy which was designed to pay for this with the savings expected from reduced utilization of the more costly inpatient services. The new policy, Policy B, became effective at the beginning of October, 1977.

Hypothesis

Funding Policy B was based on three hypotheses, each of which are tested in the study. The hypothesis are:

1. Increased availability of ambulatory health

services will lead to increased utulization of the services if parameters remain the same.
2. Increased utilization of ambulatory health services will lead to reduced utilization (demand for) of inpatient services (hospital beds).
3. The net effect of Policy B will be a reduction in cost to the IHS contract program as a whole.

STUDY DESIGN

Source of Data

Data on utilization of ambulatory and inpatient services were obtained from the providers' billing invoices to the IHS. For each patient service, the provider must provide the patient's name, the units of service provided and the itemized and total charges per patient.

The sample consisted of the 18 months of operation under Policy A prior to the policy change and the 18 months of operation under Policy B after the policy change. For this time period data was collected on the units of service provided, the number of patients served and the expenditures of the IHS contract health care program for these services. In some cases the desired data was missing from the IHS files for the time period under study. In such instances that month was removed from the study.

Operational Measures

The independent variable for hypothesis one is the availability of ambulatory services. This is measured by the dollar amount of expenditure made on a monthly basis by the IHS for two categories of ambulatory care: physician outpatient and hospital outpatient. The dependent variable is utilization of these services. This is measured by units of service provided on a monthly basis for each of the ambulatory services.

The independent variable in hypothesis two is the utilization of ambulatory health services. The operational measure for this variable is the same one used under hypothises one. The dependent variable for hypothesis two is utilization of hospital inpatient services. This is measured by the number of hospital admissions and the number of inpatient days per month by the IHS contract program.

Hypothesis three concerns the relationship between a change in funding policy and a change in cost to the system as a whole. The independent variable is the funding policy. The dependent variable is cost. It is measured by total expenditure on a monthly basis by the IHS contract health program for the ambulatory and inpatient services in hypothesis one and two.

Findings

Table one compares utilization and expenditures for outpatient and inpatient health services under the two funding policies examined in the study. Policy A was in effect for the 18 months prior to October, 1978. Policy B was in effect for the 18 months after October, 1978.

The availability of ambulatory health services as reflected by expenditures of the IHS contract health program increased 39% under Policy B in contrast to Policy A. As the table shows, there was also a significant increase in utilization of ambulatory services. These results support hypothesis one.

The utilization of inpatient services under Policy B as measured by hospital admissions and inpatient days decreased significantly (25%) on an average monthly basis. These results support hypothesis two which is the crux of the study: that an increase in the availability of ambulatory services will lead to a decrease in the demand on hospital beds. Thus it would appear that ambulatory services are effective in preventing or effectively treating illness or injury to a sufficient degree to significantly decrease the need for hospitalization.

Hypothesis three concerns the impact of Policy B on the costs of the program as a whole. Expenditures under Policy B decreased 14% or approximately $15,000 per year.

In summary, under Policy B in contrast to Policy A, the availability and utilization of ambulatory health services significantly decreased, the demand on hospital beds significantly decreased, and the expenditures on these services as a whole was significantly less. Additionally however, another significant but unanticipated aspect of the system was improved. With the exception of hospital inpatient days, Policy B demonstrated a substantial reduction in the standard deviation of each of the measures used in the study. The variation and fluctuation within the availability and utilization of the services on a monthly basis was reduced making the system in part and in whole more predictable and reliable for patients, health providers and administrators.

Discussion

The implementation of Polciy B has demonstrated the effectiveness of ambulatory health care services in reducing utilization of hospital beds when such services are adequately available and accessible. This achievement is particularly impressive in view of two significant factors identified by Bellin: (a) the health status of the patient population at the time of the policy change; and (b), the relative focus of the ambulatory care services (4).

Alaska Natives in Cordova are members of larger regional and statewide culturally defined populations which are generally regarded as medically disadvantaged relative to comparable Caucasian populations (10, 11). In a medically disadvantaged population one would expect to find a pool of

unrecognized and unattended health problems. While the degree to which it might be true in the Alaska Native Cordova population is unknown, it may explain why the reduction in hospital inpatient days was not greater than it was.

Another factor which may have affected the reduction in hospitalization is the focus of the ambulatory care. Due to the back log of medical problems, primary emphasis was placed on the effective treatment of illness and injury. Emphasis on prevention was necessarily given secondary priority. As the back log of unmet medical needs is reduced and the opportunity expands for enhanced emphasis on preventative health measures, a further reduction in hospitalization might be expected.

The results of this study must be interpreted within the limits of the research design. There are a number of variables not rigidly controlled in the analysis which could confound the results reported here. Assumptions were therefore made to neutralize the potential to confound the results. These assumptions were supported by key administrators independent of (prior to) their knowledge of the study results. The following variables were assumed to have remained unchanged throughout the 36 month duration of the study:

1. Size of eligible patient population**
2. Incidence and prevalence of illness and injury within eligible patient population***
3. Admission / discharge policies and practices of the hospital and physicians and IHS contract health care program**
4. The utilization rate of alternative resources by eligible IHS beneficiaries in lieu of the IHS contract program**
5. The efficiency and / or effectiveness of the available medical technology and / or medical precedures***
6. Native and rate of referral of patients to IHS facility in Anchorage, Alaska.

Conclusion

It is evident that Policy B emphasizing the increased availability and accessibility of ambulatory health services of the IHS contract health care program brought about a more rational use of the resources of that program. More ambulatory services were provided more strategically and less inpatient beds were utilized; all of this was accomplished at a substantial financial savings to the program. In view of the increasing costs of health care generally and hospitalization specifically, this approach appears to offer one feasible long term solution to the problem of the high cost of hospital care.

**This assumption is supported as reasonable by Mrs. Ellen Pagano, the Health Director of the North Pacific Rim, the Tribal governing body of Alaska Natives in Cordova and its vicinity at the time of the study.

***This assumption is supported as reasonable by Dr. John Muth, Director, Anchorage Service Unit, The chief Administrator of the IHS contract health program in Cordova, Alaska at the time of the study.

TABLE 1

Measures of Utilization and Expenditure for Outpatient and Inpatient Health Services Under Two Policies of the IHS Contract Health Care Program, Cordova, Alaska

	Policy A			Policy B			T-test for Diff. Between Policy A & Policy B (1)	Sig. of Diff. of means (2)	%Change From Policy A to Policy B	
	X	SD	N	X	SD	N			X	SD
Utilization of Ambulatory Care (Units of Service)										
Physician	112	24	7	142	17	18	-3.51	.001	+27	-29
Hospital Outpatient	42	18	8	66	6	7	-3.64	.003	+57	-68
Utilization of Hospital Inpatient Services										
Inpatient Days Per Month	18.7	8.7	17	14.3	8	17	-1.54	.065	-24	-.09
Inpatient Admissions Per Month	6.4	2.7	17	4.8	2.0	17	-1.97	.030	-25	-26
Monthly IHS Expenditure ($)										
Ambulatory Care										
Physician	2500	910	7	3200	560	18	-2.36	.013	+28	-38
Hospital Outpatient	1560	700	18	2200	310	18	-3.57	.001	+41	-56
Total	389	960	7	5400	610	18	-4.73	.000	+39	-37
Inpatient Care										
Hospital	4720	2370	17	2400	1330	17	3.52	.001	-49	-44
Total	9156	3184	6	7853	1405	17	1.37	.100	-14	-56

(1) SPSS T-test for Comparison of independent samples (9)
(2) One-tailed test of significance

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Introduction

I first heard Jim Penrod discuss the topic of this essay slightly over a year ago at a malpractice defense seminar which was designed primarily for attorneys. Since then he has kindly consented to summarize his remarks in the form of an essay.

Jim has been in practice about eighteen years and concentrating on professional liability defense for thirteen years. His law firm also provides legal services for the California Medical Association. He is widely known for "Penrods Laws & Observations". They generally help to bring some humor to an otherwise touchy subject.

The problem of practicing a profession without liability insurance is of increasing importance to physicians and their colleagues as well as hospitals and insurance companies. This has now become a timely topic in Alaska.

Douglas G. Smith, M.D. Chairman
Professional Insurance Committee
ASMA

UNINSURED DOCTORS

James N. Penrod*

Introduction

This article is designed to briefly present some of the issues that arise when physicians practice medicine without insurance. It will stress practical rather than the moral or philosophical issues. The moral and philosophical issues can be briefly summarized. Assuming that insurance is reasonably available and not economically or realistically impossible for an individual to obtain, practicing any profession without insurance is unwise and is the same as driving an automobile without insurance. Most people seem to agree that persons who drive cars without insurance are essentially acting irresponsibly towards the community and asking others to believe in the assumption that they are perfect and can make no mistakes. Unfortunately, insurance is traditionally viewed by insured persons as a protection against large judgments or being forced into bankruptcy and, therefore, solely as protection for the purchaser of insurance. It clearly satisfies this goal (when coverage is clear and limits are sufficient). Insurance also meets another equally important but frequently unaddressed issue, however--the responsibility of one citizen to other citizens for acts of negligence. Recognizing that no one is perfect and that we could commit negligence which could cause substantial damage to other persons, obtaining insurance coverage is a means of acting responsibly towards the individuals whom we might negligently injure. Going without insurance, aside from leaving individuals exposed to personal judgments and bankruptcy, fails to consider the plight of the persons who could be seriously injured by negligence. Last, there is the question of fairness to one's family in making these decisions, but that is a private matter.

On the other hand, in the face of rising premiums, honest situations arise when an individual simply cannot afford insurance and survive at the same time. These situatuions are rare, however, and they often involve a subjective decision as to how much an individual expects or wants to earn. Often a modest rise in fees will cover a rise in premiums (e.g., $10 per patient over 50 patients a month produces $6,000) which is a tax deductible expense. With the exception of these rare circumstances, going without insurance is the morally wrong choice as well as the practically wrong choice.

The Decision To Go Bare

The problem of being uninsured generally arises in three contexts: (1) a doctor seeks advice from an attorney or other advisor as to whether or not he or she should go "bare" (a common term used to describe an uninsured professional); (2) a doctor may seek advice concerning a malpractice case that is filed against him or her based on occurrences that were not insured; and (3) the defense of cases in which insured doctors are defendants

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as well as an uninsured doctor.

The question of advice as to whether or not a doctor should go "bare" or not carry insurance is usually a simple matter. I have never recommended it, our law firm has never recommended it, and I don't see how anyone in good conscience can recommend it to another person. Disregarding the issue of social responsibility completely and looking strictly to the interests of the individual who is going to go without insurance, one rarely reaches any other conclusion. The uninsured doctor will have no protection against malpractice cases, the costs of defense, and any judgment that could result. It is the simplest of matters for the average physician to produce a multi-million dollar damage case through an inadvertent act which for one of any number of reasons could lead to the death of a middle-aged father of a family who has substantial income or to a subdural hematoma in a young person who is now quadriplegic. The mere costs of defending a single malpractice case could easily consume the saved premiums of numerous years depending on the physician's specialty. It is not unusual in any kind of a serious and complex professional liability case for the costs and expenses of defending a case to exceed $50,000. If, of course, the case turns out to be one of clear or relatively clear liability, then settlements can go into the hundreds of thousands or millions, as can judgments. Once a judgment has been entered, an appeal can, once again, cost up to $50,000 or more depending on how lengthy and complex the trial was. If the judgment is ultimately upheld and it is big enough, the physician will have no choice but to turn to bankruptcy. If the physician was unable to bond the appeal, this decision may have to be made even sooner.

Assuming that a physician is willing to undertake all these risks, he is going to suffer a lot of worry and anxiety about these matters after a suit is filed and while it is in progress, as well as worry and anxiety in the practice of medicine, knowing that at every turn he is uninsured for any particular mistake that he or his employees or partners or covering physicians or assisting physicians might make. I could go on at length, but the risks and problems are reasonably evident. Obviously, the risk is lower in rural or less populated states, but it is still there and is generally increasing in those areas.

Insolvency Planning

The question is always asked as to what a physician who is uninsured can do by way of insolvency planning. The California Medical Association published a brochure on this subject and, if read objectively, it is quite disheartening. There are not many things you can do to truly avoid liability, protect very many assets and, at the same time, be certain that you still won't be involved in complex litigation involving fraudulent conveyances and similar matters. This is, of course, especially true if any of the insolvency planning steps are taken after an occurrence which could lead to a malpractice case has occurred or after the filing of a case.

Many schemes and ideas have been suggested to me by various attorneys and physicians such as giving everything to your wife, obtaining a fake divorce, offshore trusts, etc. None, in my opinion, offer reliable guarantees of protection from creditors of litigation down the road. Moreover, they expose you to other charges such as fraud, misrepresentation and perjury--all of which will guarantee a good steady income to your lawyers, *(I have observed that the willingness of persons A to spend person B's money is universal)* but leave many uncertainties for you. Giving all of your property to your spouse is probably reasonable in theory (if done before any negligent act has occured). I have never had a client willingly do so, however, after I asked him or her how confident they were as to the permanent and unquestionable stability of human relationships in the 1970's and 1980's. I am aware of one doctor in Northern California who did so and, when his wife filed for divorce two or three years later, she claimed it was a gift. He, of course, was in a position of claiming that he had transferred all his property to his wife to defraud potential patient plaintiffs rather than making her a gift, a less than morally strong position to take in a battle over community property. The wife ended up retaining everything on the grounds that it was a gift form the husband to the wife. *There is some truth to the old adage that you can't tell how deep a puddle is until you step in it--this one was very deep.*

Hospital Privileges and Practice

The last and probably most immediate and evolving risk of having no insurance is the question of hospital privileges. More and more hospitals are requiring insurance as a condition of having hospital privileges. The courts in California and other states have upheld these requirements as being reasonable. Moreover, the California courts have upheld a condition on privileges which not only required insurance, but also required certain minimum limits and that the insurance be purchased form a licensed recognized carrier in California. This, of course, means that off shore trusts and other types of coverage would not comply. If this trend spreads throughout the country, being without insurance could very well mean that a physician will not be able to practice in local hospitals. *I am aware of at least one physician who managed to avoid this result on religious grounds, but I doubt that claim will be generally successful.*

A less serious risk but nevertheless one which

should be considered is the fact that your peers may not want to enter into covering arrangements, referrals, consultations, or assistancy relationships with you if you are uninsured. That is, assuming they are well advised. Any insured physician who practices and deals with an uninsured physician is taking a serious risk. If there is a maloccurrence, the plaintiff is going to go after the insured doctor and, the uninsured doctor will be more than happy to have that happen. Insured physicians should realistically recognize that their uninsured peers frequently choose to ride on the coattails of the insured physicians and, in the meantime, make more money. Many hospitals have recognized this fact (which explains the trend toward requiring insurance).

I have been asked frequently how one determines whether ones peers are insured. This, of course, is a difficult subject because it is difficult to ask a peer or friend whether he or she has insurance (and in what amounts and with which insurance company). This, of course, is the only way to verify it and, even then, people sometimes don't tell the truth. If you know the name of the company, however, you can verify it with that company. One of the safest ways of guaranteeing insurance and of avoiding the unpleasant personal confrontation is for hospitals to require insurance as a matter of having hospital privileges. The hospital then verifies and assures that its staff members do in fact have malpractice insurance.

There are many contrary arguments made on this subject. Many are rationalizations, however, designed to justify a desired result (e.g., I want a Porsche rather than pay a premium). *Another observation I have made is that needs increase to absorb revenues--and then some.* As I mentioned earlier, I recognize that this is not always the case, but it is more often than not. People who tell me they cannot afford insurance are never willing to show me their tax returns. Another frequent argument is that insurance just perpetuates the terriible nature of lawyers and the flawed legal system. Some claim that not having insurance means people will not sue you. There is some validity to these arguments and I certainly would not attempt an uncritical defense of the legal profession or the legal system. There is no question that the legal profession and the legal system have some problems and drawbacks as do most other professions and walks of life. *In passing, I might note that I have observed that most poeple's solutions to problems affect someone else's cash flow. Thus, it is not suprising that some attorneys think it's all the fault of the medical profession. Unfortunately these debates all too often involve shrill overgeneralization and selfjustification coupled with posturing for image or political purposes. Rational discussion can easily get lost in this sea of frequently uninformed invective.*

Recognizing that we cannot change the system immediately, the fact is that doctors who are uninsured do get sued and frequently are driven into bankruptcy. Even if they are not, they suffer a lot of worry and anxiety and much of the enjoyment of the profession is lost. The fact is that malpractice sometimes occurs even with the best physicians and people are seriously injured and should be compensated for their injuries. The fact is that doctors who do not have malpractice insurance usually carry household insurance, fire insurance, automobile insurance, and numerous other types of insurance which are administered by the same lawyers and the same legal system which theoretically is so bad that it justifies not carrying professional liability insurance. If one looks at it honestly, it is usually an economic issue--not a matter of principle. The other types of insurance cost less. I again admit that on occasions or in some localities, it may be an insurmountable economic issue. Generally, however, it is not.

This does not mean we should shelve all arguments of principle. Whether or not the tort system as we know it is good or should be altered is a relevant question which needs to be addressed by society and government. I, for one, think that there is substantial room for improvement. Nevertheless, I do not think this fact should form the basis for a fundamentally wrong dicision at the present time.

Defending The Uninsured Doctor

It is not unusual for an uninsured doctor to approach an attorney experienced in defending malpractice cases and ask him or her to conduct the defense of the case. It is perfectly understandable that the doctor would choose someone with experience in the field. Before an attorney-client relationship is consummated, however, both parties should consider the various conflicts of interest that could arise. For example, the attorney you are choosing has experience in the field most likely because he defends numerous cases involving insured doctors in your area. If you are involved in a case where there are co-defendants, some of those co-defendants are very likely to be insured by one or more of those insurance carriers.

There are many ramifications of this situation involving conflicts between defendants, cross-complaints, finger pointing and all the various things that frequently happen when an uninsured defendant is frightened about his or her personal exposure. Without going into detail as to all the considerations, you should explore it with the attorney so that everything is on the table as to how he would conduct the defense, why he would prefer not to point the finger and file cross-complaints (for example most defense attorneys agree that this is the best way to defend joint cases), how much work

he does for particular carriers (i.e., how much income he receives from them and would that affect his judgment) what his attitude may be if he has to fight with their insured doctors and similar relevant facts.

Other conflicts that should be considered involve the various friendships that may have developed between physicians themselves and between physicians and attorneys over a period of time in the health law field. You should also consider the potential conflicts that might occur between the hospitals and their insurance carriers and the various staff physicians who might be involved and any other issues relating to the complex and careful judgments that are going to have to be made in the defense of an uninsured doctor who is personally exposed to a judgment.

The next thing to do is to search for any possible insurance coverage. On occasion, you will find that you gave insurance coverage when you didn't believe you did. For example, I am presently defending an uninsured doctor in Sacramento, California who came to me with a case that occurred, in his opinion, during a period of time in which he had canceled all of his malpractice coverage. I asked him to send me every policy he ever had, and discovered that he had had a policy a few years before with a company that had since gone bankrupt. He believed the bankruptcy was the end of that company. Under California law, and under the laws of most states, however, there is an "Insurance Guarantee Association" that handles the settlement and disposition of claims against bankrupt insurance companies which provides $500,000 worth of insurance if you are carrying more than that and whatever limits you had with the bankrupt company if they were less than $500,000. Because this case was an ongoing case involving repetitive visits over many years, it was easy to convince the guarantee association that the case was covered by the old policies and it turns out that the doctor is actually insured.

The remainder of defending a case on behalf of an uninsured doctor is the same as defending any other case with the exception that emotions and anxities will tend to run higher and the cost and expense of defending a case frequently will be a factor and will sometimes limit what the doctor and his or her attorney want to do in the actual defense of the case.

Defending An Insured Doctor With An Uninsured Co-Defendant

Before discussing some of the methods with which these cases can be defended, it is worth mentioning that it would be much better if these circumstances were avoided in the first place. If your covering physicians, partners, consultants, assistants and peers carry insurance, or it is provided through the hospital, the situation of an uninsured doctor pointing the finger and doing every thing he or she can to blame the insured defendants would not occur.

Nevertheless, because there are many uninsured doctors, the problem arises and one has to go forward as best one can. At first, everyone will claim that there is no malpractice, no one did anything wrong, and the case should be defended without anyone blaming anyone else. As the trial approaches the uninsured defendant frequently begins wavering. *Another of my observations: "Commitment to honor and principle varies inversely with the approach of trial."*

I generally try to contact the uninsured defendant's attorney early in the case with the idea of convincing him or her that the insured defendants should retain the experts and otherwise bear the brunt of the expenses of the case so as to ease the burden on the uninsured doctor financially. Hopefully, at the same time, this will tend to diminish the desire of the uninsured doctor and his attorney to blame others or point fingers in order to avoid personal exposure. Sometimes, the uninsured physician will have chosen his personal attorney who has absolutely no experience in malpractice and this is a further reason for the insured physician's attorney to try to take contol of the case. Hopefully, serious errors in judgment will be avoided by having experienced counsel handling the case. In essence you are trying to forge an alliance that will ward off hostility and in fighting between the insured and uninsured defendants.

Very honestly, success in these endeavors to avoid fighting amongst defendants will depend largely on the uninsured doctor's perception of his chances of taking a verdict alone versus the realistic chances of blaming the insured doctors. If the evidence is equal against both the insured and the uninsured defendants, you ironically have a better chance of keeping the uninsured from fighting and pointing fingers because there is less need. If the case is lost, it will be lost by everyone and, since most states are "joint and several liability" states, the insured doctors will pay the whole judgment.

It is frequently worthwhile to try to separate the uninsured case from the insured case by recommending the filing of bankruptcy which would stay the case against the uninsured doctor, or through the use of arbitration clauses in which one or the other of the cases would be arbitrated separately. Sometimes, one can convince the plaintiff's attorney that there is no case against the uninsured physician and continuing against him would hurt the overall case (obviously this is exceedingly hard to do and almost never occurs). It is sometimes possible to convince the uninsured doctor's attorney that, if he is going to blame anyone he

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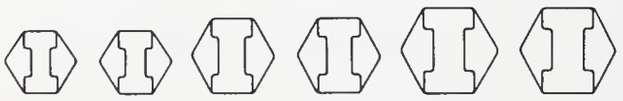
BRAND OF PROPRANOLOL HCl



10 mg 20 mg 40 mg 60 mg 80 mg 90 mg*

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)

INDERAL® (propranolol hydrochloride) Tablets

CONTRAINDICATIONS

INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS

CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema) – PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL, like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS

General: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL (propranolol hydrochloride) may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

*The appearance of INDERAL tablets is a registered trademark of Ayerst Laboratories.

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New York, N.Y. 10017

should blame targets other that the insured physician such as the state or federal governments and their cost containment systems. The governments seem more than willing to do the reverse. This requries extreme care, however.

All in all, you are going to have to live with the basic recognition that there is no perfect solution. You may be a defendant in a case even though you are convinced you shouldn't be. A friend of mine holds the view that the law is evolving to what he calls the "Andromeda Rule" (the title presumably is designed to indicate how far away he thinks some rules of law are going). The Andromeda Rule holds that if someone can think of any reason to sue another person, the other person is liable if he or she has any insurance or assets. If they don't have any insurance or assets, they are liable only if the complaint was filed on Tuesday. *It is no doubt true that some defendants will escape this net because I am certain there is an attorney out there who will sue someone with no assets or insurance on Wednesday, but that will be a rare lucky break.*

I would like to briefly digress to note that, although I am willing to use humor on occasion to make a point, I do not wish to appear glib. In general, I agree with my friend that the "legal system" (both Courts and lawyers) is going to have to rethink some issues of liability, damage exposure and procedure with the goal of controlling what appears to be never-ending expansion and ever-increasing cost and devotion of resources. On the other hand, however, most questions about the "legal system", like questions about the "medical system", are much more complex than they appear. Generalized criticisms of either system are frequently not well thought out or informed. Unfortunately, most human beings base relatively absolute judgments on the broad assumption that "the truth" is easy to determine. Anyone involved in any kind of fact finding process will quickly report that the opposite is the case. *In fact, if they are at all objective, they will report that human beings are a particularly unreliable source of information.*

For example, cases are sometimes filed that, if first blush, everyone in the medical legal and insurance fields believe is ridiculous and grounds for a malicious prosecution action. Later, after adversarial discovery is undertaken, the case becomes a clear case of negligence, or it is discovered that the records were altered or, at the very least, the plaintiff has medical experts who are testifying that malpractice occurred (I have not tried a malpractice case in years where the plaintiff did not have a medical expert witness). The reverse is also true. "Clear" cases of liability turn into completly defensible cases. At the outset of a case, the medical records, usually only partial, sketchy and frequently illegible are all that is available. No detailed knowledge of the judgments involved is available until depositions are taken. In short, outside the formal legal process, (in which people are under oath and **have** to respond to discovery requests) there is no universally acceptable method of obtaining the knowledge that is needed to make an objective and thorough determination of the relative "truth" in any given case.. *The real issue the "legal system" has to face is the question of what degree of "truth" we are willing to accept to make decisions, and how much of our resources can we reasonably afford to commit (as a society) to obtain it. This same issue (in different form) is now facing the "medical system" and, in the not too distant future, even politicians will have to admit it's there (only one Governor has dared mention it and he suffered mild crucifixion for doing so). The polls, unfortunately, support my general veiw of human nature. Everyone is for reducing or allocating health care to reduce the overall cost to society - as long as it's not* **their** *health care. (end of digression)*

If you cannot convince the uninsured physician and his attorney not to blame the insured defendants, you may be forced down to their level. Most states have "contribution" statutes whereas a codefendant who has paid a complete judgment (in a joint and several liability state) can sue the other defendant for contribution. This means the uninsured pyhsician may well end up in bankruptcy anyway and that finger pointing will do no good. *An example of yet another observation: "A Smith & Wesson beats four aces."* This has happened on several occasions in California when an uninsured doctor brought the insured doctor down. The other argument, which is the weaker, is to point out to the uninsured physician and the attorney that they really can't drag the insured doctor down with them and that it will make the results much worse if they try. This has been successful on occasion, and I have seen cases in which an uninsured physician took a sole verdict that was two or three times worse than it normally would have been because of the attempt to blame the other physicians. This is strictly a result oriented argument, however, and most uninsured physicians who are scared won't buy it until after the disaster (when they decide to sue their lawyer for agreeing to the idea of pointing the finger in the first place).

With regard to settlement of these cases, the insured physicians have to be extremely strong and resolute because they will come under intense pressure from the plaintiff's attorney, the codefendants and the court to pay for the case. Everyone will be on the insured physician's back in an attempt to get the case settled.

If all fails and you have to go to trial, again, you do the best you can under the circumstances. *One of the more brilliant observations in my stock holds that "if it doesn't matter, it doesn't matter."* If the

uninsured physician's attorney is inexperienced, one should try to influence the major decisions that are made in the case and to control as much of the trial as possible. I had a case once in which the uninsured doctor's attorney, inexperienced in these cases, was going to call an economist to testify against the plaintiff's economist. The plaintiff's economist said that the present value of all the future wage loss in medical care was about 7.8 million, whereas his economist said that it was only 7.1 million. He was very excited about this savings in spite of the fact that his doctor had no insurance and my doctor only had one million. I managed to convince him to not use the economist by citing another of my plentiful observations. *"If no one does it, there's a reason."*

Otherwise, it is a matter watching the developments of the case and doing one's best. Generally speaking, I find that if things suddenly go badly and the uninsured doctor is smiling, it is an almost certain indication that he or she has thought of a way to blame it on your insured doctor. You might as well relax and have patience *(I use Ambrose Bierce's definition of patience: "A minor form of despair disguised as a virture.")* because even under the most rigorous controlled and carefully directed circumstances, the uninsured co-defendant and his or her attorney will do as they damn well please. Just keep in mind that my last, and most optimistic observation holds that "no matter how bad the trial is going, you can't fall off the floor."

AMA DELEGATE REPORT

The AMA met twice in 1984. The first session, the annual meeting, occurred in June, at the Marriot Hotel in Chicago. The second meeting, the interim meeting, was held at the Sheraton Complex in Honolulu, Hawaii in December.

At the June meeting the AMA House of Delegates:

Reviewed the interim report of the committee working on the "Health Policy Agenda for the American People". Items approved are not necessarily adopted as official AMA policy.

Adopted report J of the Council on Medical Service regarding PRO. Report J identifies several problems with the implementation of the PRO program, especially the unduly restrictive and inflexible regulation being promulgated by HCFA.

Adopted report MM of the Board of Trustees which conveyed the final report of the Ad Hoc Commission on Vaccine Injury Compensation. The report outlined a program which would provide for federal compensation programs for those individuals severly injured due to mandated pediatric immunizations.

Adopted Substitute Resolution 2.

Resolved, that the AMA:

1. Reaffirm its polocy which supports mandatory seat belt utilization laws;
2. Reaffirm support for mandated child passeger restraint laws;
3. Support immediate implementation of a program requiring passive restraints (preferably air cushions) in all new automobiles (domestic and foreign).
4. Support legislative action to promote availability of effective seat belts on all motor vehicles in public and private buses (including school buses), taxicabs and any other vehicles carrying passengers.

Adopted Amended Resolution 29:

Resolved, that the AMA assign a high priority to monitoring and influencing federal legislation regarding PPO's in the interest of assuring quality care for patients.

The concern here is directed at opposing federal legislation regarding PPO's that preempt state regulation.

Referred to the Board of Trustees Resolution 77 entitled Participanting Physicians' plans and preferred provider organizations-Antitrust Laws.

This resloution directs the AMA to seek immediate relief from the federal statutes that prevent medical societies from passing judgment on the appropriateness of service and fees rendered by their members and from properly representing and negotiation for its members.

Refferred Resolution 79 & 138 to the Board of Trustees.

These two resolutions are concerned with the potential over supply of physicians and ask for study of the problems attendant.

Adopted Substitute Resolution 36:

Resolved, that the AMA supports the following policy related to the granting of staff and clinical privileges in hospitals and other health care facilities:

1. The best interests of patients shall be the predominant consideration.
2. The accordance and delineation of privileges shall be determined on an individual basis, commensurate with an applicant's education, training, experience and demonstrated current competence. In implementing these criteria, each facility shall formulate and apply reasonable, nondescriminatory standards for the evaluation of an applicant's credentials, free of anticompetitive intent or purpose.
3. Differences among health care practitioners in their clinical privileges are acceptable to the extent that each has a scientific basis. However, the same standards of performance should be applied to limited practitioners who offer the kinds of services that can be performed by licensed limited health care parctitioners or physicians.
4. Health care facilities that grant privileges to limited licensed practitioners should provide that patients admitted by limited licensed practitioners undergo a prompt medical evaluation by a qualified physician; that patients admitted for inpatient care have a history taken and a comprehensive physical examination performed by a physician who has such privileges; and that each patient's general medical condition is the responsibility of a qualified physician member of the medical staff.

Adopted Substitute Resolution 78:

Resolved, that the AMA voice its opposition to the development by an agency of the federal

government of a list of physicians with "special expertise" in cancer care.

Adopted Substitute Resolution 95:
Resolved, that the AMA, with the support of the American Academy of Pediatrics, request the Consumer Products Safety Commission and the plumbing industry to require new residential water heaters to have a pre-set thermostat setting of 120°F.

Adopted Report C of the Board of Trustees:
Recommendation 7 of Report C proposes that the regular AMA dues be maintained at $330 for 1985 and that the House of Delegates consider incremental dues increase in 1986 and 1987 in order to support the continued growth in Association activities. The estimated increase will be $30 for each of the two years.

Adopted Report Y of the Board of Trustees:
This report is a status report on prospective pricing for medicare inpatient hospital services and describes a variety of activity, ongoing and planned to monitor the development and inform the profession on all aspects of the system.

Adopted Substitute Resolution 5:
Resolved, that the AMA through all appropriate channels, seek the regulatory and legislative changes needed to insure that differences in DRG based payment to different categories of hospitals are based on true differences in the costs of providing services by those hospitals, rather than as arbitrary geographic criteria.

Adopted Resolution 23, which asks the AMA to oppose the "mandated algorithmic (step-by-step, decision-tree) approach" to establishing a treatment regimen as a cost-containment measure under the Medical Prospective Payment System.

Adopted Substitute Resolution 22:
Resolved, that the AMA continue its opposition to the expansion of the Prospective Pricing System to physicians, and be it further resolved, that the AMA keep the membership informed regarding current developments of any prospective pricing system for physicians under medicare.

AT THE 1984 INTERIM MEETING of the AMA House of Delegates two new societies were granted voting seats. They are the American Group Practice Association and the American College of Legal Medicine.

Declaring "Enough is Enough!", AMA President, Joseph F. Boyle, M.D., said that organized medicine must oppose Regan Administration efforts to further cut health care spending. While pledging support for efforts to curb increasing health costs, he said that "we can generate more enthusiasm and cooperation from our colleagues, and indeed do a better job, without new doses of the kinds of remedies the Administration and the Congress have been dispensing."

No single issue dominated the discussion. There were, however, a number of issues that have far-reaching implications for the profession and the health and safety of the American public.

Boxing
The House considered four resolutions calling for opposition to the sport of boxing. The House combined these resolutions into a clear statement that places the Association in the forefront of organizations calling for a total ban on boxing. This issue received much national media attention.

The House called on the AMA to:

Encourage the elemination of both amateur and professional boxing, a sport in which the primary objective is to inflict injury.

Communicate its opposition to boxing to appropriate regulating bodies.

Assist state medical societies to work with their state legislatures to enact laws to eliminate boxing in their jurisdictions.

Educate the American public, especially children and young adults, about the dangerous effects of boxing on the health of participants.

Chelation Therapy (CSA Report F, Resolution 66)
Another timely issue involves use of chelation therapy. The House spent much time in developing a policy statement on this controversial treatment. The policy reads as follows:

RESOLVED, AMA reports show that there is no scientific documentation that the use of chelation therapy is effective in the treatment of cardiovascular disease, atherosclerosis, rheumatoid arthritis, and cancer; and be it further
RESOLVED, That if chelation therapy is to be considered a useful medical treatment for anything other than heavy metal poisioning, hypercalcemia or digitalis toxicity, it is the responsibility of its proponents to (a) conduct properly controlled scientific studies, (b) adhere to FDA guidelines for the investigation of drugs, and (c) disseminate results of scientific studies in the usually accepted channels.

Professional Liability (B / Reports K and BB)

The House approved two progress reports on the Association's activities in professional liability. One report presents the results of the AMA's Committee on Professional Liability's study of costs, tort reform, and other aspects of this complex problem. The committee was established in 1982.

Another reports on the acitvities of the Special Task Force on Professional Liability established by the Executive Vice President last June. The Task Force's purpose is to coordinate, prioritize, and expand the AMA's activities in the professional liability area.

Public Image of Physicians (B / T Report 00, Resolution 2 and 30)

Concern for negative public opinion toward physicians was uppermost in the minds of the delegates. The House approved a comprehensive and thoughtful report on the Association's current activities and plans for improving the public image of physicians. The report noted:

> "Orgainzational efforts to improve the public image of physicians are inherently limited and can never replace the actions of individual physicians committing themselves to spending more time with patients, giving them better instructions, and discussing their fees."
>
> Public perceptions take many years to form, and since the problem has been developing for a long time, it will not be solved quickly.
>
> Public perceptions of physicians are often inconsistent, and at times contradictory depending upon the background and experience of the individual.
>
> Public expectations, another image issue are often unattainable.

In addition to the above report, the House adopted a substitute resolution formulated by the Reference Committee. It called upon the AMA to:

> Strengthen its efforts to increase the public's awareness that physicians are patient advocates.
>
> Develop and implement an immediate program to focus on increasing the public's understanding of key changes that are occurring in health care delivery and the impact that such changes will have on health care quality and access.
>
> Plan a long range national public education campaign utilizing consultants with established reputation.
>
> Provide assistance and encouragment to state and county associations to develop and implement similar public awareness programs and monitor and evaluate such programs for their effectiveness.

Benefits of Unified Membership (B / T Report DD)

The House approved several recommendations for the Board of Trustees providing aditional benefits to members in unified states. The new benefits are designed to encourage and retain unification. Currently only Oklahoma and Illinois are unified states. The new benefits include:

> Services of an AMA ombudsman within the organizational structure.
>
> Ten percent dues discount for members excluding students and residnets.
>
> Staff services for special projects.
>
> A special Advisory Committee to meet regularly with the Executive Committee of the Board of Trustees and the EVP.
>
> A higher reimbursement rate to constituent societies for dues collection.

Also, the House asked the Board of Trustees to Study alternative mechanisms to provide membership incentives for all state, county, and specialty societies who have successful recruitment programs.

AMA Budget

The House approved a Fiscal Year 1985 budget based on operating revenues of $126,430,000 and operating expenses of $124,580,000 with an anticipated favorable balance of $1,850,000. Incorporating an AMACO gain of $670,000 and a provision for income taxes of $930,000, the anticipated revenue in excess of expense is $1,590,000.

There is no dues increase for 1985.

Before the House considered the budget, the Reference Committee cautioned the delegates that the $1.6 million is a narrow margin and about 1% of the total budget. It imposes severe limitations on the growth of activities that can occur in the year ahead without additional revenues or displacement of existing activities.

Peer Review Organizaitons (Resolutions 10, 19, 39, 43, 49)

The House considered six resolutions regarding various aspects of HCFA's implementation of PRO. There were several speakers who emphasized the difficulties of negotiating realistic performance of objectives in the PRO contracts. Also, the delegates complained about the inappropriate emphasis on cost constraint rather than the quality of services provided. The House directed the AMA to:

> Continue its support for professionally directed programs of medical peer review

which places the emphasis on quality rather than cost.

Actively oppose HCFA's use of arbitrary admission and quality objectives in the activities of PRO.

Implement a PRO monitoring system to obtain documentation necessary to redress PRO implementation problems through legislative and regulatory means.

Urge the Federation to collect and provide information to the Association.

Actively seek legislation to correct demonstrated inequities in the implementation of the PRO program.

Opinions of the Judicial Council (JC Reports A, B, C, D)

The House discussed and approved a number of ethical issues in considering four important reports from the Judicial Council.

1. "Physician-Patient Relationship: Respect for Law and Human Rights" which prohibits illegal discrimination in the physician-patient relationship.
2. "Terminal Illness--Patients' Preferences" which relates to "living wills" authorizing withdrawal from life support systems when the patient is irreversibly terminally ill.
3. "New Medical Procedures" which states that physicians have an obligation to share their knowledge and skills, and to report the results of their research.
4. "Surrogate Parenting" which urges couples with infertility problems to investigate the alternatives available to them, including adoption. The Judicial Council believes that surrogate motherhood presents many ethichal, legal, psychological, societal, and financial concerns and does *not* represent a satisfactory reproductive alternative for people who wish to become parents.
5. "Hospital-Physician Risk-Sharing Arrangements under DRGs" advises that physicians may not derive a profit, nor be financially penalized, nor risk loss of hospital privileges under profit or loss sharing agreements.

Hospital Medical Staff Section

With increasing maturity and sophistication, the Hospital Medical Staff Section continues to grow in influence within the House of Delegages. The HMSS at its fourth assembly meeting grappled with the problems of physician-hospital relations.

Over 400 representitives attended and submitted 14 resolutions to the AMA House. Virtually every state and territory was represented and the delegates learned that 31 state medical associations have created similar sections to deal with these issues at the local level.

Medical Acts by Unlicensed Individuals (Resolutions 21, 41, 68, 96)

The encroachment of non-physicians into the practice of medicine stimulated four resolutions and much debate in the House. Although AMA policy on this issue was reaffirmed, the delegates called for more aggressive actions, including:

Monitoring legislative and regulatory activities.

Disseminating information concerning such activity as expeditiously as possible.

Developing a pro-active program to provide AMA legislative and staff support to assist state medical and specialty societies in their efforts to oppose enactment of new legislation which authorizes independent practice of medicine by individuals who are not licensed to practice medicine and surgery in all its branches.

Scientific Reports

The House agreed to permit the publication of reports from the Council on Scientific Affairs without the approval of the House. This new practice will allow earlier dissemination of scientific information. At this meeting the Council submitted a number of scientific reports. Topics included:

The Health Effects of Agent Orange.

Diagnostic and Treatment Guidelines for Child Abuse and Neglect.

Effects of Toxic Chemicals on the Reproductive Cycle.

Nicotine Chewing Gum for Cessation of Smoking.

Guidelines for Reporting Estimate of Probability of Paternity.

AMPAC Year-End Report

The American Medical Political Action Committee (AMPAC) enjoyed a record-breaking year in 1984, AMPAC Chairman Fred J. Rainey, M.D., told the AMA House of Delegates. During the 1983-84 election cycle, Doctor Rainey said, AMPAC participated in 578 campaigns, with a 90% success rate. He noted that this included support for 233 Democrats and 345 Republicans, proving the bipartisan nature of the organization and demonstrating that "party labels have no place in our decisions."

Doctor Rainey also said that AMPAC membership now stands at a record 55,500, and that the organization had raised some $3.7 million in campaign funds in 1983-84, up from $2.4 million in the previous election cycle.

Conclusion

AMA House meetings provide a unique educa-

tion opportunity and I would encourage you to attend and participate. Any member of the Association may present testimony at the Refernece Committee hearings and, of course, corridor discussions on the issues provide ample opportunities to get your views across.

If you can't come to the meeting you can still be represented through your delegate. Let your delegation know your opinions. You can also prepare a resloution and request that it be submitted to the House.

Many AMA policies began with an individual physician who had a good idea and coaxed it through the democratic process.

Richard Witt, M.D.
AMA Delegate

POST GRADUATE COURSES

Wilderness Medicine
August 12-16, 1985
Lake Tahoe, Nevada
23 hours, category I
Course Coordinator-Mark D. Bracker, M.D.
For further information contact Office of Continuing Medical Education, M-017, UC San Diego School of Medicine, La Jolla, Ca. 92093, telephone; (619) 542-3940

LETTER TO THE EDITOR

Dear Editor:

This letter might be entitled Hi There Abe Flexner---Woe Are We. Prior to about 1911 the medical schools of the United States were largely run for profit. Without standards for not only premedical education but also without standards for either time spent in medical school or the subjects taught. The result was scores of shoddy medical schools and hundreds of graduates of dubious skill practicing medicine.

Owing to the efforts of the American Medical Association and the influence of Abraham Flexner's report funded by the Carnegie Foundation, standards for premedical and medical education were established and most of the proprietary medical schools either closed their doors or raised their standards. Medical schools as we know them today were established. Their graduates have been and are among the best in the world. There exist in the USA many medical centers where not only graduate MD's from this country but also from all over the world come to learn, study, observe, teach, gain new skills and update old ones.

In the past two decades many new medical schools were established to make up for the alleged scarcity of MD's. Because of the steeply increasing cost of medical care, economy and judgement in the expenditure of medical funds are of paramount importance today. In the November 1984 issue of the Bulletin of the American College of Surgeons we learned that by 1990 we will have a surplus of 56,000 surgeons. How many surplus non-surgeons we will have is not mentioned. There will be a plethora in the fields of general surgery, obgyn, and ophthalmology to mention just three. There will be a slight deficit in the number of thoracic and plastic surgeons available. Meanwhile all over the country surgical assistants, physician's assistants, nurse practitioners and other technicians have gradually appeared to take over jobs that used to be done by MD's in training.

The cults are spewing forth graduates of their schools too. These folks also attract the public and are unanimous in their demands to practice medicine in direct contravention to the medical practice acts of the 50 states. In 36 states optometrists, for example, through political action have obtained the unconstitutional "right" to use medication on the human eye and to diagnose and treat eye disease. The time is here when we must protect the public and head off the cultists by insisting that anyone who wishes to practice medicine must have graduated from a medical school approved by the AMA, have an MD or DO degree, have completed an internship or residency of at least one year's duration and have a license to practice medicine and surgery in the state.

The words doctor and physician by common usage once meant MD to the average person. But the irregulars have usurped the words and we now have "naturopathic physician", and "optometric physician"; and chiropractors seeking hospital privileges in general hospitals. We have such terms as ophthalmologist, oculist, optician, and optometrist to further compound confusion.

I believe we are on the verge of having the public plunged into the pre-Flexner confusion of "doctors" who are not MD's. I further believe that the only remedy lies in political action.

Thirty six states have allowed optometrists to practice medicine in spite of the exertions of MD's, mostly ophthalmologists, to defeat the pernicious legislation. Optometrists encourage the belief that the AMA has some arcane influence on the practice of medicine, fees, and the distribution of MD's. They further encourage the false doctrine that MD's are out solely to protect their own turf and not the public good. The real object of the optometrists and cultists is to gain the prestige, public respect and money MD's enjoy without complying with the medical practice acts. They wish to gain through legislation what they cannot or will not obtain through education. This is deceptive and clearly against the public interest.

Optometrists have circumvented the medical practice acts of 36 states by spending large sums of money to become deeply involved in political action. We can profit by their example.

Not only must we tax ourselves to assist in the election of sympathetic legislators but we must also seek allies among dentists, nurses and opticians as well as our patients and the public at large. In almost every one of the 36 states where optometrists are permitted to practice medicine the margin of victory was very thin. We can wipe it out if we ally ourselves with the other professions supporting legislation they want in return for help with legislation we desire. There is no other way. Such mutual effort must start at the national level and continue to spread to states, counties, cities and individual MD's. If we don't act now the medical practice acts of every state will exempt optometrists form the medical practice acts permitting them to use medicine on the eye and diagnose and treat disease. If optometrists succeed the cults won't be far behind. Then all the public good generated by the Flexner Report so long ago will be completely undone and the public will be at the

Mercy of anybody who wants to call herself or himself "doctor".

Having lost my bid for reelection to the House the last MD voice in Alaska's legislature defending the medical practice act will be stilled. Indeed, woe are we!

Sincerely,

Milo H. Fritz, M.D., FACS

AUXILIARY NEWS

Haines Convention

The 1985 ASMA Convention in Haines is just around the corner. Exciting programs and activities have been planned for physicians, spouses and children*. Haines is steeped in history, wildlife, recreation, entertainment and spectacular scenery. The convention is an opportunity for spouses to be introduced to new ideas and subjects, current medical concepts, comradery, fun times, and the making of new friends. Dr. Ken Cooper "Dr. Aerobics", famous physician and author, and his wife, Millie will be among the guests at the meeting. I encourage you to attend and to actively participate in the Haines Convention. You won't be disappointed. The following is a tentative schedule of activities for the Auxillary:

	Wednesday, June 5:
1:00	Fairweather Cruise to Haines departing Juneau
6:00	Salmon Bake, Tribal House
7:30	Chilkat Indian Dancers
8:30	Ken Cooper, M.D. Speaker
	Thursday, June 6:
Morning	Choice of special activities
Noon	Buffet Luncheon with Spouses, Speaker, Mrs Ken Cooper
2:30	Marianne Wieland, Alaskan artist, speaker
3:30-10:30	Cruise and dinner to Skagway or Tour to Chilkoot Trail
	Friday, June 7:
7:00-12:00	Auxiliary walk or climb to Mt. Riley
Noon	Lunch at Sheldon Museum with talk and film
6:00	Medical Specialty Dinners
8:30	"Lust for Dust" Melodrama
	Saturday, June 8:
7:00-9:00	FUN RUN
10:30	Annual Meeting
11:30-2:00	Progressive House Luncheon
6:00	President's Banquet and closing

*Special children's activities include playfield with equipment, parks, swimming, movies, crafts, nature walks.

Auxiliary Sponsors History Project

The 1984-85 State Auxiliary project, Physicians of the North Census and History Gathering, is well under way. The purpose of the project is to begin preserving Alaska State Medical history. The goal was decided upon at the 1984 State Convention in Valdez as a way to celebrate the Silver Anniversary of Alaska Statehood as well as document the state's medical development and progress before it is forgotten.

For several months a committee of Auxiliary members worked with professionals in oral history and census gathering and devised a one page questionnaire. In mid-January the questionnaire was mailed to every physician living in the state. In addition to obtaining history information the questionnaire will be helpful in gaining statistical insight as to the number of physicians who have come to Alaska, when the greatest influx was, the most prominent specialty, how many are still comming, why, how, and from where they have come. All questionnaires recieved by May 1st will be included in the initial report to be presented at the 1985 Haines Convention in June.

The project will be ongoing resulting in printed pamphlets, visual displays and recorded oral histories. Every physician is encouraged to full out the questionnaire. In case a physician was missed in the mail a questionnaire is included in this issue of the Journal. The project has excellent potential and has met with much enthusiasm.

Lorrie Horning
ASMA Auxiliary President

Anchorage

The Anchorage Medical Society Auxiliary wishes to thank the Anchorage Medical Society members who voted to approve covering the cost of ten films dealing with health tips for the television-viewing public. By AMS financial support and the Auxiliary handling ordering, retaping, scheduling and distribution of tapes, both organizations will present the public with valuable information.

The tapes involve thirty seconds of material dealing with such subjects as: adult and teen alcohol abuse, smoking, nutrition, immunization for children, information on taking medication, children not talking to strangers, aging gracefully, and dispelling myths aobut the elderly. The tapes are professionally produced PSAs supplied by the AMA for distribution by the National AMA Auxiliary.

During the last five seconds of the tapes a message will be shown stating that the health tips are brought to the public in the interest of their health by the Anchorage Medical Society and its Auxiliary. Hopefully this will establish positive "PR".

The project will require only one or two Auxilians. Hopefully the project will spread statewide.

Patrice Gerster
Anchorage Medical Society Auxiliary, President

Alaska State Medical Association Auxiliary

4107 Laurel Street • Anchorage, Alaska 99508 • 562-2662
Contact: Lorrie Horning, President

Physicians of the North Census and History Gathering
For All Alaska Physicians

The 1984 State Auxiliary Project is to begin an accounting of the medical history for the State of Alaska. Please take a few minutes to answer these questions and help us document your valuable experiences and information. Possible use of information will be printed booklets, visual displays, and recorded oral histories. It is your option to answer any question.

Your name: _____ Spouse's name: _____

Address: _____ Number of children _____

Phone: _____ Male: _____ Female: _____

Nationality: _____ Place and date of birth: _____

Medical Specialty: _____ Public Health: _____ Private: _____

Hospital _____

When did you come to Alaska?: _____

Has it been a continous residence? _____

If not, where else have you been, and when? _____

_____

Arrival point in Alaska? _____

Where are you now? _____

Why did you come to Alaska? _____

_____

_____

What kind of medicine are you practicing now? _____

What facilities are you working with? _____

If different than when you first came to Alaska, please explain: _____

_____

Do you have any experiences or lively stories you would be willing to share related to medicine? Briefly narrate below, dictate and we'll translate or call us on the phone. _____

_____

Would you be willing to be interviewed further? _____ How? _____

Do you mind if this information is used statistically? _____ Publicly? _____

Do you have any photographs that we could have to make copies of or that you would be willing to give us? _____

Please include below the name and address of any physician who has left the state who should be included or mentioned in this study: _____

Comments: _____

_____

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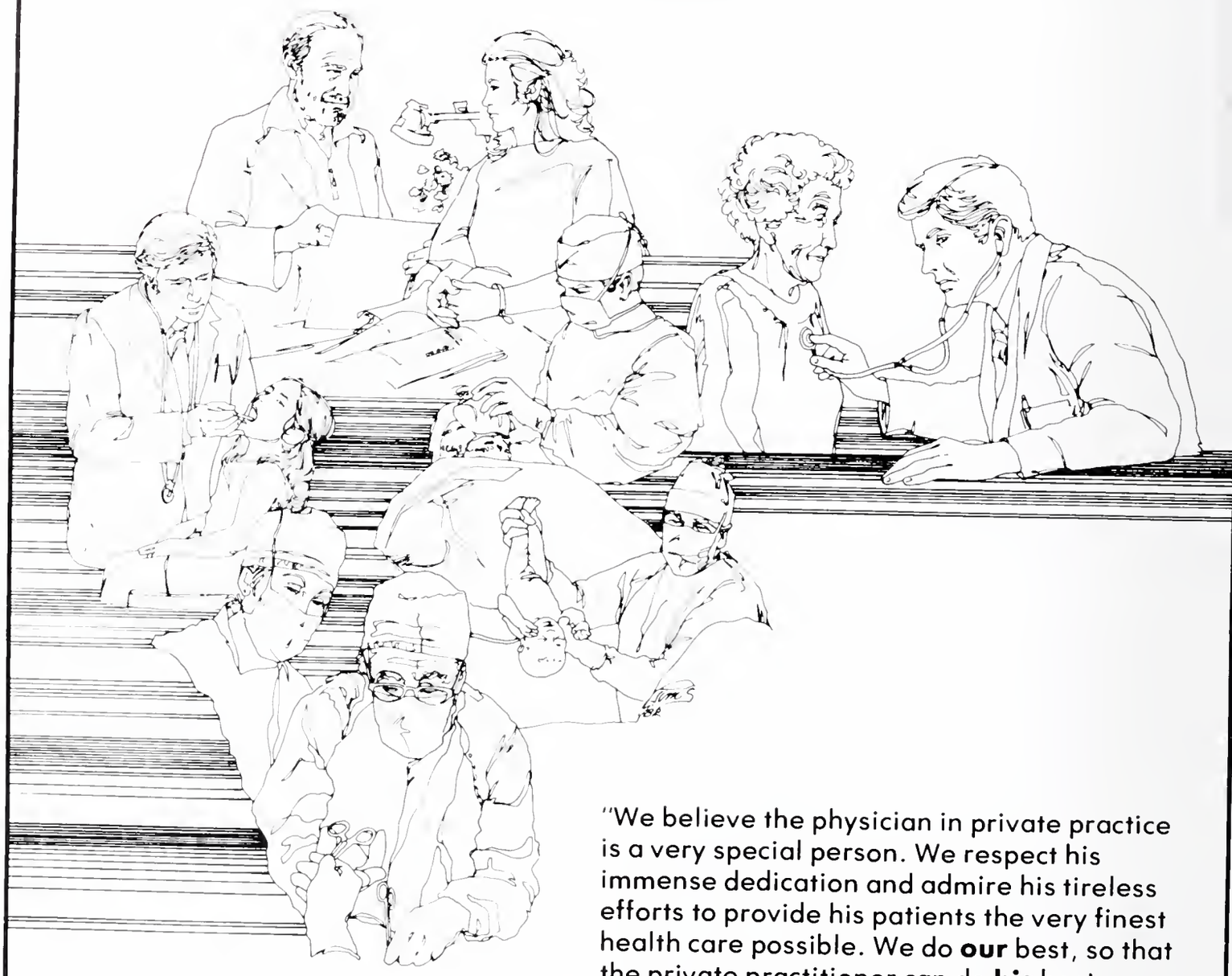

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ALASKA MEDICINE, Vol. 26, 1984
SUBJECT INDEX

Alaska Medicine Essay:
The Changing Nature of Truth 14
Commitment to Public Health, an Issue for 1984 56
"The Care and Feeding of Legislators or How About a Prescription for Some Sleeping Pills, Doc?" 79
Industrialization and Public Health in Alaska, Policy for the Future 114
Alaska State Medical Association Accreditation Committee, Continuing Medical Education 62
Mission Statement 101
All That Coughs Is Not Bronchitis 34
Alternative Delivery Systems, An Introduction 31
An Alaskan Experience with Cardiopulmonary Bypass in Resusitating Patients with Profound Hypothermia and Cardiac Arrest 29
Answer to Physician Self Assessment 21
ASMA 1984 Convention in Valdez 87
1984 ASMA Resolutions, Valdez, Alaska 66, 97, 124
Auxiliary News 77
Buckle Up - Save A Child 71
Chemonucleolysis 108
Circumpolar Health, 1984: An Alaskan Perspective 10
Clinical Use of Calcium Channel Blockers 1
Computerized Projective Testing As an Aid in Medical Diagnosis 26
Donald Roe Rooney, M.D. 95
E. S. ("Stu") Rabeau, M.D. - 1920-1984 36
"Economic Survival For the 80's - Are We an Endangered Species?"
Introduction 36
Employer Strategies for Health Care Planning 40
DRG's Effect on Hospitals and Physicians 50
MD's and Hospitals: Conflict or Partnership? 28, 94, 122
Glossary of Terms 57
History of Medicine in Alaska:
Ships' Surgeons and Naturalists in the Early History of Alaska, Part 1: Voyages of Discovery, 1741-1786 82
Ships' Surgeons and Naturalists in the Early History of Alaska, Part 2: Voyage of Trade and Science, 1786-1807 117
Ships' Surgeons and Naturalists in the Early History of Alaska, Part 3: Voyages For Empire And The Northwest Passage, 1814-1854 22
Traditional Surgery of the Alaskan Natives 74
Hypothermia: The Cause of Death After Rescue 112
Inaugural Address of The President, American Medical Association Annual Meeting, June 1984 104
Infant Apnea Syndromes: Part I 67
Medicine As a Product 98
Nonsteriodal Anti - Inflammatory Drugs (NSAID), Another Nephrotoxin 27
Physician Self Assessment 26, 65, 121
Post Graduate Courses 19, 64, 93
President's Page 16
Proposal for a Study to Determine the Feasibility of Developing a Cancer Research Center in Alaska 13
Some Historical Aspects of the Treatment of Hypothermia 29

ALASKA MEDICINE, Vol. 26, 1984
AUTHOR INDEX

Anderson, David, M.D. . . . 27
Bowers, William, M.D. . . . 2, 94
Boyle, Joseph F., M.D. . . . 112
Brownsberger, Keith, M.D. . . . 93

Cassell, Wilfred A., M.D. . . . 1
Erkmann, Jane . . . 66
Fish, Winthrop, M.D. . . . 26, 122
Fortuine, Robert, M.D. . . . 79

Glassman, Arnold . . . 36
Goldsmith, Jeff, Ph.D. . . . 50
Harrison Jr., Harry, M.D. . . . 104
Johnson, David, M.D. . . . 62
Keller, Ronald W., M.D. . . . 34

Lloyd, E. LL., M.D. . . . 74
Mala, Theodore A., M.D. . . . 108
Mayer, Willian P., M.D. . . . 10
McEvoy, Richard D., M.D. . . . 67
Middaugh, John, M.D. . . . 56.114
Moeller, David, M.D. . . . 27

Newman, Michael, M.D. . . . 71
Parry, Richard, M.D. . . . 19, 64
Rhyneer, George, M.D. . . . 27
Seuffert, George, M.D. . . . 31
Silverman, James, M.D. . . . 40
Sternhagen, Charles, M.D. . . . 16

Templin, David W., M.D. . . . 13
Tucker, Steven B. M.D. . . . 98
Wilder, Norman H. M.D. . . . 101
Witt, Richard, M.D. . . . 14

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References: **1.** Kales J *et al: Clin Pharmacol Ther* 12:691-697, Jul-Aug 1971. **2.** Kales A *et al: Clin Pharmacol Ther 18*:356-363, Sep 1975. 3. Kales A *et al: Clin Pharmacol Ther 19*:576-583, May 1976. **4.** Kales A *et al: Clin Pharmacol Ther 32*:781-788, Dec 1982. **5.** Frost JD Jr, DeLucchi MR: *J Am Genatr Soc* 27:541-546, Dec 1979. **6.** Kales A, Kales JD: *J Clin Pharmacol 3*:140-150, Apr 1983. **7.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21*:355-361, Mar 1977. **8.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **9.** Amrein R *et al: Drugs Exp Clin Res* 9(1):85-99, 1983. **10.** Monti JM: *Methods Find Exp Clin Pharmacol 3*:303-326, May 1981. **11.** Greenblatt DJ *et al: Sleep 5*(Suppl 1):S18-S27, 1982. **12.** Kales A *et al: Pharmacology 26*:121-137, 1983.

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ORIGINAL ARTICLES:

Estimates of Cancer Incidence in Alaska Natives Due to Exposure of Global Radioactive Fallout from Atmospheric Nuclear Weapons Testing
Charles D. Stutzman, M.D., Donna M. Nelson, M.N., Anne P. Lanier, M.D., M.P.H. 53

Infant Apnea Syndromes Part II
Harry Harrison, Jr., M.D. 64

Chemical Disclosure Legal Developments Affecting Alaska
Leo Uzych, J.D., M.P.H. 67

FEATURES:

Alaska Medicine Essay
David A. McGuire, M.D. 72

History of Medicine in Alaska
Gwynneth Wilson 74

President's Page
David A. McGuire, M.D. 75

Adopted Resolutions of ASMA, Haines, Alaska, 1985 76

Auxiliary News
Carolyn Crouch, Lorrie Horning 83

Post Graduate Courses 85

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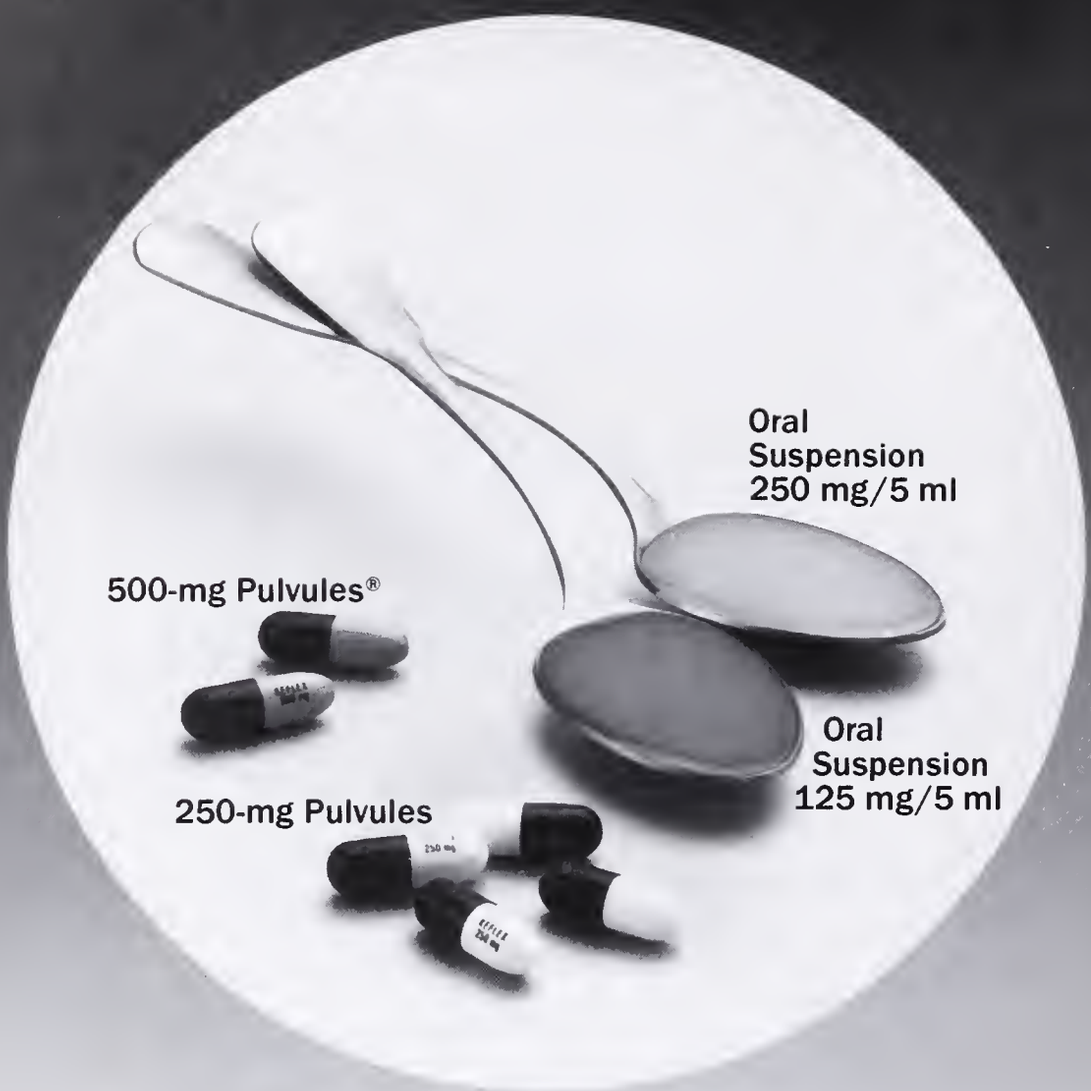

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ESTIMATES OF CANCER INCIDENCE IN ALASKAN NATIVES DUE TO EXPOSURE TO GLOBAL RADIOACTIVE FALLOUT FROM ATMOSPHERIC NUCLEAR WEAPONS TESTING

Charles D. Stutzman, M.D.[1]
Donna M. Nelson, M.N.[1]
Anne P. Lanier, M.D., M.P.H.[2]

Abstract

During the peak period of atmospheric nuclear weapons testing in the northern hemisphere in the early 1960's, measurable concentrations of cesium-137 and strontium-90 accumulated in native residents of certain northern Alaskan villages through the lichen-caribou food pathway. Now that a significant latent period for cancer induction has elapsed, the question of possible cancer increases from this radiation exposure has been raised. To address this question, radionuclide measurement data and dose estimates made during this period were reviewed. Leukemia, breast cancer, and bone sarcoma were identified as the malignancies most likely to be induced from internally deposited cesium-137 and strontium-90, and risk estimates were developed for these cancers. Maximum annual dose rates due to these radionuclides were found to be low and comparable to the natural background radiation levels that exist in certain parts of the United States. In addition, the number of Alaskan natives likely to have received these maximum doses was found to be very small. As a result, the number of cancer cases expected from this exposure is too low to be detected by epidemiologic study of the populations actually exposed. Fallout radionuclides other than cesium and strontium have aslo been detected in Alaskan ecosystems, but at levels resulting in doses considerably lower than those referred to above.

Abbreviations

Ci — Curie (a measure of the quantity of radioactive material)
mCi — millicurie (10^{-3} Ci)
uCi — Microcurie (10^{-6} Ci)
nCi — nanocurie (10^{-9} Ci)
pCi — picocurie (10^{-12} Ci)
rad — A measure of radiation dose in tissue
mrad — millirad (10^{-3}rad)
rem — a measure of radiation dose equivalent, an entity which takes into account the quality of the radiation as well as the absorbed dose in rads. The rem is equivalent to the rad for gam-

[1]Cancer Branch, Chronic Diseases Division, Center for Environmental Health, Centers for Disease Control, Atlanta, Georgia 30333.
[2]Arctic Investigation Laboratory, Center for Infectious Disease, Centers for Disease Control, Anchorage, Alaska 99501.

ma and medium to high energy beta radiation.

mrem — millirem

Introduction

During the early and middle 1960's, radionuclide body burdens were measured in a considerable number of northern Alaskan Natives because of concern about concentration of radioactive fallout through the lichen-caribou-human food pathway. Now that a significant latent period for cancer induction has passed, recent public concern has been raised by Natives about possible increases in cancer incidence among Alaskan Natives as a result of this exposure. To address this concern, personnel from the Cancer Branch, Center for Environmental Health, Centers for Disease Control (CDC) met with personnel from the Arctic Investigations Laboratory, Center for the Infectious Diseases, CDC, Anchorage in August, 1984, to review the problem. Several approaches to the problem were planned: 1) to assess the original methods of measuring radiation exposure and the estimates for the groups exposed; 2) to calculate the cancer incidence which could result utilizing estimates of dose and population exposed in Alaska; 3) to review Alaska Native Tumor Registry data pertinent to the radiation issue; and 4) obtain original measurement data on individuals and compare this with their subsequent cancer experience. This report includes items 1 and 2 above; items 3 and 4 will be reported subsequently.

Background

The bulk of atmospheric nuclear weapons testing was carried out from 1945 to 1963 in the northern hemisphere by the U.S.A. and the U.S.S.R. During this period, 379 atmospheric tests were conducted. In the ten years following the Limited Test Ban Treaty in 1963, only 43 atmospheric tests were conducted, 29 by France and 14 by the People's Republic of China, neither of whom were party to the treaty (1). Although subsurface nuclear weapons testing by the major powers has continued since 1963, the peak periods of contamination of the biosphere documented by extensive radiation monitoring throughout the world occurred during the 1950's and the early 1960's.

Radioactive fallout consists of radioactive particles that have entered the atmosphere as a result of nuclear detonations. Explosions at, or slightly above, the earth's surface (i.e. atmospheric nuclear tests) result in the greatest release of radionuclides into the atmosphere and, therefore, the largest amount of fallout. Subsurface nuclear detonations (the predominant type after the test ban treaty) release only a fraction of the total resultant radioactivity, that fraction being inversely related to the depth of the detonation.

Radioactive fallout is classified as local or global depending on its spatial and temporal distribution. Local fallout consists of larger particles (generally over 35 microns in diameter) and falls back to the earth's surface within about a day and within several hundred miles or less from the detonation site. Global fallout is composed of smaller particles, rises higher into the atmosphere, and becomes widely dispersed over the earth's surface. The higher the yield of the nuclear device (i.e. the megatonnage), the higher the fallout particles are blown up into the atmosphere, and the longer they take to return to the earth's surface.

The atmosphere can be divided into the troposphere (from sea level to about 45,000 feet) and the stratosphere (from over 45,000 feet to about 160,000 feet). Low yield detonations yield mainly tropospheric fallout which returns to the surface within a month or so from the time of detonation. Fallout deposition from the troposphere is dependent on weather conditions and usually occurs along a band in the same latitude as the detonation site. High yield detonations are powerful enough to push radioactive material up into the stratosphere. This material returns to the surface over a period of months to several years. Deposition is a function of latitude and deposits occur in higher concentrations in the temperate zones. Since the majority of the weapons testing has taken place in the northern hemisphere, more fallout occurred in the northern than southern temperate zone. The major portion of global fallout from nuclear weapons testing has been from the stratosphere.

Fallout is composed of a variety of radionuclides whose biological importance depends on factors such as the type of radiation emitted, particle size, solubility, physical and biologic half-life, etc. Only a few of these radionuclides pose a potentially significant long-term health hazard since only some occur in abundance, have relatively long half-lives, and have chemical characteristics that facilitate transport and concentration through food chains and result in accumulation of significant amounts of radioactivity in sensitive body tissues. Of the 200 or more radionuclides possibly present right after a nuclear explosion, only a small percentage have half-lives long enough that they exist more than a few hours. Since most global fallout has been stratospheric, which takes months to years to return to the earth's surface, very few of these nuclides are deposited as radioactive fallout. Of those that are, even fewer are found in concentrations sufficient to pose a potential hazard to human health. For this to occur, some type of mechanism of concentration through the food chain is required. The major factor involved in the concentration of fallout radionuclides in arctic and subarctic food chains is the ability of the lichen to absorb and retain particles from the atmosphere and from precipitation. A large fraction of fallout

material can be directly absorbed by the lichen and, because lichens have evolved very efficient mechanisms for conserving nutrients in their barren environments, much of this is retained in the plant for many years. Northern Alaskan caribou migrate southward in the fall into the Kobuk and Koyukuk River drainage areas, where they spend the winter and feed predominately on lichens. In the spring the caribou migrate northward back through the passes of the Brooks Range, and during the summer wander throughout the north western Arctic feeding predominately on seed plants, which have fallout radionuclide concentrations two to ten times lower than those found in lichens.

During the 1950's and early 1960's, subsistence hunting and fishing provided the economic base for the northern Alaskan native villages. These subsistence economies have been gradually shifting toward capital-based economies because of the increasing immigration and influence of white people in northern Alaska, particularly in the larger coastal villages. This shift was accelerated by the oil industry development that occured in the North Slope region during the 1970's. One result of this shift has been a general decrease in dependence on caribou as a food source. However, during the period of maxium fallout and continuing through the 1970's, caribou was a major food source for many of the northern villages. This was particularly true for the Eskimos of Anaktuvuk Pass in the Brooks Range, where the highest body burdens of cesium-137 occurred in 1964 (2).

Cesium-137 has a radioactive ("physical") half-life of 30 years (see Table I) and a biochemical behavior similar to potassium so that it accumulates and concentrates in many different body tissues including caribou muscle which may be eaten in large quantities by certain Native groups. After ingestion, cesium is rapidly absorbed and, since it is soluble in body fluids, it is distributed fairly unifromly throughout the body, although concentrations are generally higher in muscle than in bone and fat. The biological elimination half-time is about 135 days in adult males, 85 days in adult females, and ranges from about 60 days in older children down to 12 days in infants (3). Thus, for a given initial body burden, dose would be roughly proportional to body mass (i.e., younger smaller persons would receive a lower dose per unit body burden). Pregnant women also have a shorter biological elimination half-time, resulting in a lower dose per unit body burden to the fetus (4). From the standpoint of carcinogenesis, since cesium distributes fairly evenly throughout the body and emits penetrating higher energy gamma radiation, the critical organs are those that are most sensitive to induction of cancer by radiation, namely bone marrow and possibly breast (5).

Strontium-90 is another fallout radionuclide of potential concern because of its long physical half-life (28 years), its absorption and concentration by lichens, its concentration in caribou bone after ingestion, and its long effective half-life in bone (18 years-see Table 1). Strontium has a biochemical similarity to calcium, which explains its affinity for bone. Because it emits high energy beta radiation, strontium-90 deposited in bone irradiates both the calcified bone and the adjacent bone marrow (3). The tumor types of prime concern with strontium exposure are therefore bone sarcoma and leukemia.

Iodine-131 is also of some possible concern because, although it has a much shorter physical half-life (8 days-see Table I), it emits beta particles and concentrates like ordinary iodine in the thyroid gland, one of the organs most sensitive to cancer induction by radiation (5).

Table I

Metabolism of Selected Radionuclides

Radionuclide	Half-life		Target Organ
	Physical	Effective*	
Cesium-137	30 yrs	135 days	Whole body (similar to potassium)
Strontium-90	28 yrs	18 yrs	Bone (similar to calcium)
Iodine-131	8 days	7.6 days	Thyroid

* Effective half-life takes into account both the decrease in radionuclide activity due to radioactive decay (physical half-life) and the decrease due to biological elimination of the nuclide from the body (Biological elimination half-time).

Although the three radionuclides just discussed are the primary ones of concern because they may cause long-term health effects, several other fallout nuclides also merit some mention. However, these other nuclides do not appear to be significant long term health hazards for Alaskan Natives because: 1) no effective concentration process occurs in the arctic and subarctic ecosystems that would result in a significant accumulation of, and dose to, humans; 2) their physical half-life is too short to present a long-term hazard, given the time frame over which the accumulation processes occur; or 3) they simply do not exist in sufficient quantities to present a significant health hazard.

The period of greatest global fallout occurred in the early 1960's. In 1965 measurements were made of a number of different radionuclides in lichens, in tissues of caribou and wolves (which feed on Caribou), and in urine samples of Eskimos in the Anaktuvuk Pass region. Results of these measurements are the basis of many of the comment in Table II.

Table II

Selected properties of fallout radionuclides of potential public health importance for Alskan Natives

Nuclide	Physical half-life	Comments
Tritium (a)	12 years	no concentration process; mean urine concentration in Noatak in 1972 was 1500 pCi/1, corresponding to an annual dose of 0.15 mrem (6); present in form of tritiated water.
Carbon-14 (a)	5,600 years	no concentration process; present in form of carbon dioxide; eventually transferred to deep oceans.
Argon-39 (a)	260 years	inert gas; no concentration process.
Iron-55 (b)	2.9 years	concentrates most in ocean fish (salmon, tuna); Alaskan natives had maximum body burdens of 2.3uCi(7) (maximum permissible body burden for general population is 100 uCi for 55 Fe).
Ruthenium-106 (c)	1 year	no concentration beyond lichen stage of food chain; not detected in caribou flesh, wolf flesh, or Eskimo urine (8).
Cerium-144 (c)	290 days	no concentration beyond lichen stage in food chain (very poorly absorbed from gastrointestinal tract in man); not detected in caribou flesh, wolf flesh, or Eskimo urine (8).
Plutonium-239 (d) Plutonium-240 Plutonium-241	24,400 years 6,580 years 13.2 years	unlike Cs and Sr, Pu is not related to any nutrient element; degree of transport in food chains is very low (successive trophic level concentration factor is less than 0.01);(1) inhalation would be the most important exposure pathway; mean dose commitment in U.S. from nuclear testing through 1970 is 2 mrad to the lung and 0.2 to the bone; doses estimated in Lapps through lichen-reindeer food chain are negligible (9).
Americium-241 (e)	458 Years	primarily created in situ from ^{241}Pu; estimated doses in Lapps negligible (9).

(a) Neutron activation product (air)
(b) neutron activation product (soil)
(c) fission product
(d) may exist as unreacted weapon component
(e) decay product of ^{241} Pu

Dose Assessment

During the 1960's a considerable amount of measurement of radiation was done in the arctic and subarctic ecosystems, including assessments of radionuclide levels in lichens, caribou and Eskimos. Of prime importance are the cesium-137 body burden measurements done during various years on Eskimos in many of the northern Alaskan villages, particularly Anaktuvuk Pass where caribou was the primary component of their diet at that time.

Body burdens of the higher energy gamma-emitting radionuclides such as cesium-137 can be directly measured by whole-body counting. The classical whole-body counter consists of one or more sensitive gamma detectors in a heavily shielded iron room. This arrangement permits quantification and identification (by its specific gamma energy spectrum) of small amounts of a radionuclide in the body with minimal interference from natural background radiation. Comparison of the amount of activity detected with a known quantity of the same radionuclide measured in a phantom allows an accurate determination of the body burden.

Portable whole-body counters, which require about 5 tons of lead brick shielding, have been used for some cesium-137 body burden measurements in Alaskan Eskimos (10). These counters reduce background about as well as the iron-room counter, show little variation in sensitivity with body size, and are only slightly less sensitive than the iron-room counter. Average body burden measurements are generally within a few percent of the expected values based on counting in iron-room whole body counters. A less cumbersome whole-body counting method, which does not use any lead shielding, has been developed for field measurements (11). A gamma detector is placed in the sitting subject's lap, and the subject is counted while bending over the detector. This configuration gets as much of the subject's body as close to the detector as possible, while the body provides some shielding from background radiation. The counting efficiency decreases with increasing body size and measurements are corrected for this factor. This method is best suited for radionuclides that are distributed uniformly throughout the body, such as cesium, and for subjects with higher body burdens. The accuracy of this technique has been estimated to be ±20% for body burdens around 200 nCi cesium-137 and decreases to ±100% at body burdens of 40 nCi (based on comparison of subjects counted by both this technique and the iron-room whole body counter). Many of the cesium-137 body burden measurements in Alaskan Eskimos were done using this simplified technique, which was appropriate since body burdens of possible health concern are well above 200 nCi.

The highest average cesium-137 body burdens measured (over 1000 mCi) occured in Anaktuvuk Pass residents in the summer of 1964. From 1962 through 1967, residents of Kotzebue and regional river villages of Noatak, Selawik, Noorvik, Kiana, Shungnak, Kobuk, and Ambler had intermediate levels (150-650), and the northern coastal villages of Barrow and Point Hope had the lowest levels (3-150 nCi) (12-18). The maximum levels in Anaktuvuk Pass occurred about 2 years after the peak period of atmospheric testing in 1962. This time lag is consistent with stratospheric fallout deposition and subsequent concentration of cesium through the lichen-caribou-human food pathway. Since 1964, cesium levels in Anaktuvuk Pass residents have slowly decreased, as shown by body burden measurements done in the early 1970's (19). The slowness of this decrease is due to the 30-year half life of cesium-137 and the 10-year or longer retention half-time for cesium in lichens. The seasonal fluctuation occurs because the caribou feed mainly on lichens only during the winter. Caribou killed in the spring (and consumed over the summer) had higher levels than those killed in the fall. This resulted in higher summer cesium levels in the Eskimos.

Because strontium-90 is a pure beta emitter, body burdens cannot be measured by whole-body counting techniques. However, strontium-90 body burdens in Anaktuvuk Pass residents have been estimated on the basis of annual strontium ingestion rates and the metabolism of strontium in humans. Strontium-90 concentrations were measured in caribou meat samples obtained from Anaktuvuk Pass Eskimo hunters from 1964 to 1966 and adult male Eskimo body burdens were estimated to be about 900 pCi, which was very similar to body burdens of residents of New York and San Francisco during the same period (20). (Residents of the contiguous 48 states had elevated strontium levels from consumption of dairy products and vegetables, which are not important components of the traditional Eskimo diet). A higher average estimate (7400 pCi) was made from strontium-90 concentrations measured in 9 individual rib samples from Alaskan subjects obtained during 1963 and 1964, although these concentrations were also similar to those in bone specimens from residents of other states (21,22). Strontium-90 ingestion rates, and estimated body burdens, for audlt females and for children were, respectively, 50% and 20% of those for adult males. Caribou meat provided 80 to 95% of the strontium-90 body burdens of norhtern Alaskan Eskimos during the 1960's. The steadily decreasing body burdens since 1966 resulted more from a decreased dependence on caribou as a food source, rather than from decreasing levels of strontium in caribou meat (20).

Although direct measurements of iodine-131 in

thyroid glands of Alaskan Eskimos were not done, measurements and dose calculations were done on thyroids from deer, elk, caribou, and reindeer from Alaska and several other states during and after the peak 1962-63 nuclear testing period. Doses received by these herbivores during this period are shown in Table III (23).

Table III

Thyroid doses received by selected herbivores from 131 I fallout during the 1962-63 nuclear testing period.

State	Animal	Thyroid Dose (rem)
Colorado	Deer	20
Wyoming Washington	Elk	7.6
California Maryland New York	Deer	2.5
Alaska	Caribou Reindeer	0.8

The herbivore thyroid dose appears to be related to distance and direction form the sites of testing. This pattern is consistent with the relatively short half-life of the iodine-131 (8 days) and suggests that troposheric fallout deposition is the predominant process involved. Alaskan herbivores received the lowest thyroid dose of all the animal locations sampled. This suggests that either arctic depostion of iodine was lower or that iodine did not enter the arctic food chain as readily as in other areas of the country. No specific thyroid dose estimates are available for Alaskan Natives. However, dairy products were not an important part of the traditional Eskimo diet, and no other significant human exposure pathway is evident.

Elevated levels of certain naturally occurring radionuclides have also been measured in Anaktuvuk Pass residents. Lead-210 and polonium-210, the solid decay products of radon-222 which occurs naturally in the atmosphere, have been found in relatively high concentrations in arctic lichens and caribou. The concentration process for this "natural fallout" is similar to the one observed with cesium-137 and strontium-90. Concentrations of polonum-210 in caribou flesh where about 10 times greater than lead-210 concentrations. Measurements of polonium-210 in urine samples from Anaktuvuk Pass residents in the early 1960's showed levels 200 times higher than those measured in other states. These levels corresponded to about ten percent of the maximum permissible body burden for polonium-210 (24).

Cancer Risk Estimates

Cancer risk estimates were based on information from the National Research Council Committee on the Biological Effects of Ionizing Radiations, 1980 (BEIR III Report) (5). They are expressed as a range of numbers rather than as a precise value because of the uncertainty associated with carcinogenic risk from radiation. Several important points must be emphasized regarding these risk estimates and resultant expected cancer incidence rates that were derived from them:

1. The highest average dose measurements were used in calculating expected cancer incidence. These occured in Anaktuvuk Pass residents, who were still largely dependent on caribou for their food source in the early and middle 1960's. The actual number of persons who received these maximum doses was probably less than 100 (the total Alaskan Native population of Anaktuvuk Pass in 1970 was 97) (25). The population in 1980 of the northern Alaskan villages where measurements were taken was 5,715 (26). (The total Alaskan Native population was 64,047 in 1980 and 50,819 in 1970). Thus the percentage of Alaskan Natives with additional radiation exposure from fallout via the lichen-caribou food chain is small.

2. Expected cancer incidence rates were calculated with the assumption that the peak exposure levels of the middle 1960's remained at the same level over the next 20 years. Body burdens have actually been steadily decreasing during that period. Average cesium-137 body burdens in Anaktuvuk Pass residents measured in 1979 result in a dose of 8 mrem per year (2), which is more than 20 times lower than the peak dose levels in 1964. Strontium-90 body burdens have been decreasing by about 9 percent per year since 1970 (20).

3. When risk estimates for a particular cancer site were based on more than one risk model in the BEIR III Report, the highest risk estimates were used to calculate the upper limit of the expected cancer incidence rate.

These three factors result in a "worst case" estimate of expected excess cancer incidence rates, and the "most likely case" estimates may be 10 to 1000 times lower. Expected excess cancer rates

were estimated for four cancer sites that have the greatest potential for induction by radiation in this situation.

A. Leukimia may result from cesium or strontium exposure. Radiation-induced leukemia has a relatively short latent period (median 7 to 8 years in the Japanese A-bomb survivors). Latency appears to be shorter in younger age groups and with higher doses. There is a decrease risk 2 to 5 times higher among the very young and the very old.

Acute leukemia and chronic myelogenous leukemia are the major types associated with radiation exposure. Chronic lymphocytic leukemia has not been shown to be related to radiation (5).

B. Breast cancer may result from cesium exposure. The female breast is very sensitive to induction of cancer by radiation. A conservative lower limit for the minimum latent period is 5 to 9 years. The maximum latent period is 30 or more years. Latency appears to be independent of dose but strongly dependent on age at exposure. The lower the age at exposure, the longer the latency period tends to be. The occurrence of radiation-associated breast cancer parallels the age distribution of "spontaneous" breast cancer, after a minimal latent period.

The dose-response for breast cancer appears to be linear down to zero dose, i.e. the risk-per-rem is similar for low and high doses. Risk does not seem to depend on dose rate. However, risk may depend on age at exposure, although precise age pattern is not clear. Risk estimates based on the Japanese A-bomb survivors' experience show a 2 to 3 fold higher risk in the 10 to 19 year exposure age group, compared to the 20 to 39 year age group and the 50+ year age group. There is not substantial evidence yet of increased risk for exposure before age 10 years. The risk in the 40 to 49 year exposure age group is slightly negative and the reason for this is not apparent. These variations in risk of breast cancer with age at exposure may be due to changes in tissue sensitivity to radiation carcinogenisis resulting from variations in ovarian function at different ages (5).

C. Bone cancer may result from strontium exposure. Risk estimates are based mainly on the knowledge gained from studies of exposure to alpha emitters (eg., radium-226), which have a high relative biological effectiveness compared to beta and gamma emitters. This would tend to overestimate the risk from strontium-90, a beta radiation emitter. Radiation-induced bone cancers have shown a latency period ranging from 4 to 52 years. Generally, latency is directly related to the duration of the exposure. Short exposure periods show a peak latency of 6 to 8 years, while continuous long-term exposures (which would result from strontium ingestion) show much longer latent periods. The most common types of radiation-induced bone cancers (in order of decreasing frequency) are osteosacroma, fibrosarcoma, and chondrosarcoma. No cases have occured in the radium dial painters at doses much below 900 rads. No increases in bone sarcoma was noted in the Japanese A-bomb survivors (2).

D. Thyroid cancer (iodine exposure). The radiation-induced types of thyroid cancer are papillary carcinoma and follicular carcinoma. Anaplastic carcinoma of the thyroid has not been associated with radiation. The minimum latency periods is about 10 years. The peak latency period, if one actually exists, is probably from 15 to 25 years. External gamma radiation has a higher carcinogenic risk than internal beta radiation (such as occurs with iodine-131). The reason may be partly because the iodine resides mainly in the colloid of the thyroid follicle and gives a variable beta dose to the sensitive cellular component of the follicle. The risk from iodine-131 is also lower than that from the shorter-lived radioactive iodine isotopes (which are a local rather than global fallout problem), probably because iodine-131 gives a lower dose rate (since it has a longer half-live) and may allow for some type of cellular recovery or repair.

An entity termed "minimal or occult microscopic thyroid cancer" is found at necropsy in 30% of the Japanese population and 15% of the American population. It is felt to have no malignant potential and is not known to be induced by radiation. Therefore, occult carcinoma should not be included with clinical disease when developing or applying radiation risk estimates.

Radiation-induced benign thyroid adenomas occur 3 times more commonly than malignant carcinomas. Other non-malignant radiation effects on the thyroid gland are associated with higher doses than those which induce cancer: acute thyroiditis- 20,000 rads; and hypothroidism (thyroid ablation) - 2,000 rads external or 5,000 rads internal irradiation (5).

The range of expected cancer which may result annually from fallout exposure in Alaska is given in Table IV and compared with age-adjusted rates for the United States. It cannot be emphasized enough that these are "worst case" estimates, and also that the actual percentage of Alaskan Natives to which these rates might apply is probably extremely small.

Table IV

Cancer risk in Alaskan Natives due to radioactive fallout from atmospheric nuclear weapons tests (based on "worst case" estimate-assuming a 20 year exposure at the maximum dose rate)

Radionuclide	Cancer or tumor type	Highest average body burden or tissue concentration	Corresponding dose rate	Risk co-efficient (case per rem per year per million persons (5)	Expected annual excess cancer rate (per 100,000) for a 20 year exposure	Annual age-adjusted [3] cancer rate (per 100,000) for U.S. from SEER program 1973-77 (29)
Leukemial Cesium-137	1330 nCi (27)	190 mrem/yr[1]	0.01 to 2.2	0.004 to 0.8	9.8	
Strontium-90	Breast cancer	1330 nCi (27)	190 mrem/yr[1]	0.60 to 6.1	0.23 to 2.3	85.4
	Bone cancer	2.8 pCi/gm Ca (20)	12.5 mrem/yr[2]	0.09 to 0.76	0.002 to 0.019	0.8
	Leukemia	2.8pCi/gm Ca (20)	12.5 mrem/yr[2]	0.01 to 2.2	0.0002 to 0.055	9.8
Iodine-131	Thyroid cancer	unknown	unknown	4		4.0
	Benign thyroid adenomas	unknown	unknown	12		

1) 1000 nCi cesium-137 gives 143 mrem/yr whole body and average skeletal dose (4).
2) 1.0 pCi strontium-90 per gram of calcium in bone (pCi/gm Ca) gives 4.5 mrem/yr skeletal dose (28).
3) Age-adjusted to the 1970 Census population.

Table V shows some representitive doses from various sources for comparison with the doses due to fallout in Alaska. Natural background radiation includes that from cosmic radiation, external gamma radiation from naturally occurring radioactive material in the earth's curst, and radiation from naturally occurring radionuclides found in the body. Average levels in the United States range from 100 to 250 mrem per year (30). Certain areas of the world have unusually high natural radiation levels, averaging as high as 3000 mrem per year and ranging up to 12,000 mrem per year (31). Epidemiologic studies done in some of these regions have not shown increased cancer incidence attributable to these exposures although the number of people exposed was generally only a few thousand. Average annual medical exposure (32) and the current regulatory guidelines are also given in Table V. Doses received by the Japanese A-bomb survivors ranged from 0 to over 400,000 mrem. There is little evidence of excess cases occurred at doses over 50,000 mrem in this group (33).

Table V

Average radiation doses from selected sources.

Soruce	Dose (mrem)
A. Annual Natural background radiation (to whole body).	
1. United States	
Colorado	250
Wyoming	245
New York	135
Alaska	130
Georgia	125
Texas	100
2. High Background areas of the world.	
Kerala, India	1500
Minas Gerias, Brazil	2000
Sri Lanka (Granite areas)	3000
B. Medical exposure	
1. Average annual dose per person in United States	60
2. Dose to exposed organs from specific exams.	
Chest X-ray	4 (bone marrow)
	19 (lungs)
Upper GI Series	117 (bone marrow)
	532 (lungs)
Barium Enema	298 (bone marrow)
	48 (lungs)
C. Regulatory guidelines	
1. Annual occupational limit.	5000
2. Annual general population limit.	500
D. Japanese A-bomb survivors. Dose resulting in about 50% mortality in 3 to 5 weeks (received by about 1500 survivors of Hiroshima and Nagasaki)	300,000

Table VI shows the maximum expected numbers of cancer cases per year due to cesium-137 and strontium-90 body burdens for the northern Alaskan Villages. With a population totaling 5,715 assuming the worst case estimate, a maximum of 3.6 cases of cancer would have developed in 20 years. These numbers are so small that an increase could not be detected by epidemiologic study.

Table VI

Maximum expected annual number of cancer cases due to cesium-137 and strontium-90 body burdens for northern Alaskan villages.

Village	Anaktuvuk Pass	Kotzebue	Barrow	Point Hope	River Villages	Total
1980 native population	191	1573	1720	434	1796	5715
Leukemia	0.002	0.01	0.01	0.004	0.02	0.049
Breast Cancer	0.004	0.04	0.04	0.01	0.04	0.13
Bone Sarcoma	0.00004	0.0003	0.0003	0.0001	0.0003	0.001

Conclusions

1. Studies over the past 25 years have adequately identified and measured the fallout radionuclides of potential significant health importance in Alaska.

   A. Cesium-137 is the radionuclide of primary concern because of the lichen-caribou-human pathway, although strontium-90 and iodine-131 were of importance also.

   B. Cesium levels were measured by whole body counting. This was done throughout the areas where caribou was a significant food source, and the whole body counting techniques used were sensitive and precise enough to detect cesium body burdens of potential concern.

   C. Strontium-90 levels in humans were assessed from dietary information and measurements in caribou flesh, and to a limited extent from direct measurements in Human bone specimans.

   D. Iodine-131 levels were measured in caribou only, but no significant exposure pathway exists for humans.

   E. Other radionulcides including tritum, iron-55, rutherium-106, cerium-144, plutonium isotopes, and americium-241, have been detected in fish and game, but none were found that appear to be at levels which would pose a hazard to humans.

2. The cancer risk due to the levels of fallout radionuclides in Alaskan Natives is very low, consistant with the observation that the maximum annual dose rates from measured body burdens of cesium were comparable to dose rates from natural background radiation in some regions of the United States (Table V).

Recommendations

1. Individuals on whom cesium measurement data was obtained should be identified so that subsequent cancer development can be determined through matching of individuals in the Alaskan Native Tumor Registry. Cancer occurrence in individuals among this group can then be compared with their measured cesium body burdens, to determine if any correlation exists. The Cancer Branch of the Center for Enviromnental Health, CDC, is willing to work with the Alaskan Native Tumor Registry and the Alaska Department of Health and Human Services in this effort.
2. Aside from the above, no other study of fallout exposure and cancer incidence among Alaskan Natives is recommended at this point. Based on current knowledge regarding radiation carcinogenesis, the radiation doses received and the populations potentially exposed are too small to expect such a study to detect any effect.

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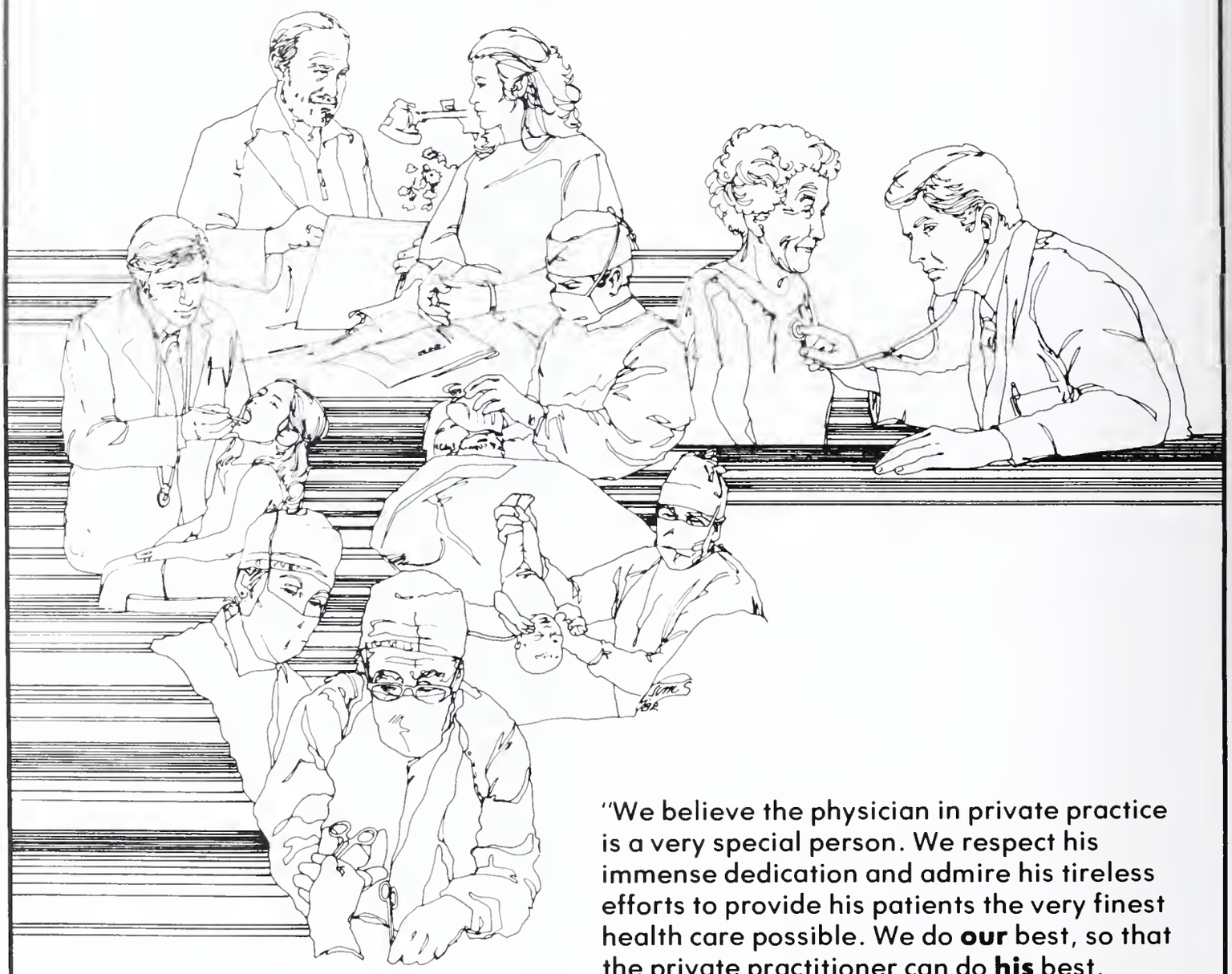

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INFANT APNEA SYNDROMES:

PART II

Harry Harrison, Jr., M.D.

Introduction

It is, however, a well verified fact that a cat will kill an infant by stealing its breath. Its habits have been observed to run as follows: the cat places itself upon the breast and stomach of the sleeping child, and breathes with the latter; that is when the child inhales, the cat exhales, full in its face and close to its mouth, thus making it impossible for the baby to get any air except from the cat's foul lungs. By some it is supposed that the attraction is the milkladen breath of the child; but the regularity with which it steals the pure air and denies a fresh supply, indicates a more vicious and wicked purpose (16).

There is considerable medical research underway to identify infants at risk for developing Sudden Infant Death Syndrome and recurrent apnea. Sleep study centers are concentrating on diagnostic evaluation and intervention modalities to characterize and prevent morbidity associated with recurrent apnea. This presentation will examine the current literature related to the incidence of mortality and aspects of morbidity associated with Infantile Apnea.

The following definitions, while not unanimously applied, will be the basis of this presentation. Sudden Infant Death Syndrome (SIDS) is defined as the sudden, unexplained death of an apparently healthy infant for whom a routine autopsy fails to identify the cause of death (1). Research has revealed that SIDS may not be as sudden as once thought. Subtle abnormalities suggest that the pathophysiology predisposing to death may be present weeks or months before death. Some of the pathologic changes seen in SIDS victims are most consistent with chronic hypoxemia. These changes may be the end result of recurrent subclinical apneic and bradycardic events.

NEAR MISS for SIDS is a subjective label based on an emotional response evoked in the observer (usually a parent) by a feeling that the infants' death was imminent without timely intervention. Near miss is an undesireable term since it implies some definite association with SIDS which has not been proven and indicates a false certainty that death was inevitable without intervention. A preferred term is Prolonged Infantile Apnea.

PROLONGED APNEA is defined as an episode of cessation of breathing for 20 seconds or longer, or a shorter respiratory pause associated with bradycardia, cyanosis, or pallor. The most useful aspects of the definition is the observation of respiratory movements and color changes. Nonmedical personnel will not notice bradycardia.

The incidence of SIDS is two to three per 1000 lives births. There are 7000 deaths each year in the nation. From an estimation of vital statistics in Alaska the incidence is three to four per 1000 live births or approximately 35 deaths per year (14).

Unlike the incidence of SIDS the mortality rate of infants with apnea varies from one to nearly seven percent (table I) (2,5,7,10). This apparent indecision is a result of the lack of comparability between apnea centers, no standards of diagnostics, need for national collaborative study, and lack of widely accepted pathology standards. The lack of a more specific incidence of mortality for infant apnea is only rivaled by the difficulty in determining more specific morbidity associated statistics.

In attempting to determine morbidity some of the critical questions to be answered are; 1) is there evidence that recurrent apnea causes organ injury in the infant, 2) if so, how much apnea is too much, 3) what types of organ injury can result, and 4) what aspects are the apneic event are responsible for the

end organ injury?

Apnea induced injury was examined by McDonald in one thousand infants of which 6% had noncardiac, recurrent cyanotic attacks (13). There was unequivocal correlation with spastic diplegia and sensori-neural deafness. Spastic diplegia developed in twenty percent, while ten percent demonstrated deafness in the premature infant group.

The distribution of repeat apneic episodes from a study done at Stanford (2) showed that repeat apneic events affects 63% of full term and 83% of preterm infants.

A group of normal full term infants were observed during sleep at Syracuse U. in 1979 (6). There were 122 short apneic events (5-14 seconds) recorded using a polygraph at weeks one and four postpartum. Twenty-eight infants were subsequently maintained on a home monitor due to recurrent apnea. Bayley developmental scores were done at 9 months. The monitored infants scored higher in mental and psychomotor development than unmonitored babies with recurrent short apnea. Further, the use of home monitors were not found to be associated with negative developmental consequences.

A detailed retrospective study of the neurologic sequelae related to unmonitored infants with recurrent apnea was done by Bacola (4). Forty term and preterm infants were examined. Nineteen had recurrent apnea while 21 had no apnea. Of the nineteen with apnea 9 were found to have neurologic sequelae. The deficits ranged from spastic paraplegia to mild psychomotor retardation (table II). These studies further suggested that apnea seen in the first week of life was not as important as that seen after 1 month of age.

Neurologic abnormalities were further studied by the Stanford Sleep research center in 1979 (11). They examined forty-one infants with recurrent apnea and twenty-one controls. There were twenty-four (58%) infants with abnormal nerologic examinations. The most commonly observed abnormality was shoulder girdle weakness. The incidence of shoulder girdle weakness at four weeks post event was ninety-two percent. Major weakness was evident in thirty infants (68%) at sixteen weeks post event and in 17% of the controls. Unfortunately, no continuing follow-up was done to determine the late effects on school age children.

Thus there is evidence that recurrent apnea is associated with disabilities. As yet, we can not adequately answer the second of our questions. How much apnea is too much may be better stated: IS ANY APNEA TOO MUCH?

Target Organ Damage

The target organ for recurrent apneic episodes is the brain. It has been known for a decade or more that necrosis of the periventricular white matter is the pathologic substrate of spastic diplegia. The lower extremities are more severely affected than the upper extremities.. Necrosis includes the cerebral white matter of the cortex associated with motor movement of the lower extremities. A study, in 1973 by a Toronto, Canada group (3) of 28 autopsied infants looking for periventricular leukomalacia identified 4 infants. All of these babies had a history of at least one ischemic and hypoxic event. The research group concluded that periventricular leukomalacia progresses to brain cysts and cavity formation and leukomalacia is not lethal but may result in spastic quadriplegia. An intercranial hemorrhage was seen in 7 infants and none of the above 4 infants with periventricular leukomalacia.

In neonates and young infants the areas of infarction result from failure of perfusion of the brain. This may answer our fourth question regarding the aspects of apnea which are responsible for brain injury. In the face of hypoperfusion, brain injury is potentiated by concurrent hypoxemia. Bradycardia associated with infant apnea was investigated by a group from the U. of Hawaii (12). They found that apnea reduced the heart rate by 18%, isolated hypoxia reduced the heart rate by 19%, and hypercapnia reduced the heart rate by 6%.

All of these conditions don't always occur simultaneously or of equal severity in the infant with apnea. Another study from Denver (17), further supports the contention that short apneic pauses resulting in bradycardia may lead to hypoxemia. Short apnea (20 seconds or less) resulted in cardiac decelerations more than ninety percent of the time. Apnea from ten to nineteen seconds reduced the heart rate by 17% and if it was associated with hypoxemia the rate was reduced by 35%. Apnea from 20 to 39 seconds reduced the heart rate by 37% but if it was accompanied by hypoxia the rate was reduced by 80%.

The previous studies looked at the overt, gross signs of neurologic impairment, but what of the more subtle changes which we have not examined. These subtle changes may, in the end, be of more significance to the morbidity associated with infantile apnea. A study from Vanderbilt U. (8) examined 112 apnea events in infants with continuous EEG monitoring. Of the 112 apneic events, 77 were associated with convulsive electroencephalographic discharge. Thirty-five events demonstrated no convulsive discharge. Apnea of twenty seconds or greater was always associated with a reduction in the heart rate up to 40%. The implication that 70% of infants with apnea have abnormal EEG discharges during their event is disturbing.

The pathophysiology for deafness is less clear than that for spastic displegia. The existing data suggests that neuronal necrosis in brain stem nuclei is the responsible lesion.

A study reported in the NEJM from Australia (9) sheds some light on an approach to assess brain stem functioning in infants with apnea. In the study there were 75 infants without apnea and 44 infants with apnea. The 44 infants had slower brain stem conduction, implying brain-stem dysfunction. The brain stem conduction tests improved 8 weeks after the apneic events. The brain stem conduction time of babies with apnea was longer than those seen with normal infants at a similar age.

A further study also showed that brain stem function in a group of 36 apneic infants was abnormal (14). Twenty-one (58%) of the 36 infants with apnea had abnormal brain-stem tests. No follow-up on these infants was done to determine if the dysfunction disappeared. As our diagnostic acumen improves, I would venture to guess that we will find more evidence of brain stem and cerebral dysfunction.

The question posed at the start of this presentation may be answered thus:

1) Does recurrent apnea cause organ injury?
A) The available information indicates that spastic diplegia and deafness are the most common manifestations of brain injury.

2) How much apnea is too much?
A) No definite answer to this yet, but research and clinical data should address long term follow-up of infants to determine late sequelae.

3) What types of organ injury can result?
A) Periventricular leukomalacia and neuronal necrosis in the brain stem. Therefore, subtle, although reparable, organ injury may be associated with recurrent apnea.

4) What aspects of the apneic event is responsible for the brain injury?
A) Hypoxemia and hypoperfusion appear to be significant aspects for the injury. Hypercapnia may potentiate the injury.

Future studies will determine the quantitative relationship between morbidity and derangements of oxygenation and perfusion during the apneic event. Follow-up studies will help to determine the evaluation of neuropathology and development of neurologic deficits.

Table I
Mortality Estimates of Infantile Apnea

6.6% mortality	(Kelly)
2.4%	(Brooks)
1%	(Ariagno)
5%	(Beckwith)

Table II
Range of Neurologic Sequelae

The 9 infants had:

spastic paraplegia
spastic quadriplegia
strabismus (3)
bilateral hearing loss
speech defect (at 9.5 yrs.)
delayed walking
mild psychomotor retardation

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CHEMICAL DISCLOSURE LEGAL DEVELOPMENTS: AFFECTING ALASKA

Leo Uzych, J.D., M.P.H.

Abstract

Alaska has promulgated legislation pertaining to the right to know about chemical hazards emanating from the workplace. This type of legislation may be of valuable assistance to the medical community, and the public in general. The federal government has also promulgated a "hazard communication." The federal communication is intended specifically to preempt state laws pertaining to communication information about chemical hazards to workers in manufacturing industries. This raises an issue of possible preemption, in whole or part, of right to know laws in Alaska, and eslewhere. The legality of the federal communication has been challenged in federal court.

Alaska has promulgated legislation pertaining to the "right to know" about chemical hazards in the workplace (1-2). This type of legislation may potentially be of valuable assistance to the medical community and the general public. The federal government has also promulgated a "hazard communication" (3). The federal communication is intended specifically to preempt state laws concerning the communication of information about chemical hazards to workers in the manufacturing sector. This raises a legal question about possible preemption, in whole or part, of right to know legislation in Alaska, and other states. The preemption issue will probably be decided ultimately by the courts.

There is a strong public health need for comprehensive right to know legislation in our country. The United States is an increasingly chemically-polluted society. Industry now uses an estimated 63,000 chemicals to make a large number of products (4). About 1,000 new chemicals are produced annually (5). Hazardous substances are found frequently in many industries, including health care, manufacturing, construction, agriculture, transportation, public safety, and numerous other services. Millions of people are being exposed daily to a burgeoning number of variety of hazardous substances which may substantially imperil their health. More than 80% of the population have measureable pesticide residues in their bodies (6). Based on data collected by the federal government, about 25 million American workers are potentially exposed to hazards identified by the National Institute for Occupational Safety and Health (7). As many as 40 to 50 million Americans may have been exposed to hazardous chemicals regulated by the federal Occupational Safety and Health Administration ("OSHA").

Exposure to hazardous chemicals is associated with substantial morbidity and mortality. The Bureau of Labor Statistics has released data showing approximately 162,000 new cases of occupational illness in 1977, and 143,500 in 1978 (7). The United States Public Health Service estimates that up to 390,000 workers contract work-related diseases annually (8). An estimated between 4 and 20% of all cancer cases are attributable to exposure to workplace cancer-causing agents. Job-related diseases cause an estimated 100,000 non-accidental deaths each year.

Chemical wastes are similarly a major public health problem. The amount of hazardous wastes produced each year in the United States is estimated at between 150 and 275 million metric tons (9). An estimated 90% or more of the waste is disposed of in a way presenting an actual or possible threat to the public health. Of the 30,000 waste disposal sites in the nation, about 1,000 to 2,000 may pose serious health hazards to communities (8).

The exact scope of the potential public health problem presented by chemical and wastes is difficult to ascertain. In many instances, there is a long latency period of months and even years between the time of initial toxic exposure and the onset of recognizable clinical signs and symptoms. The body of available epidemilogic data concerning various physical and chemical agents, and possible resultant health harms, is oftentimes very limited. Inadequate record-keeping is a further problem. According to a survey conducted by a United States Senate Committee, many of the 53 largest chemical companies claim that they do not have records of where they dumped their wastes prior to 1968 (6).

Over 2,500 persons were killed in the recent Bhopal, India industrial disaster (10). It is not inconceivable that a similar-type industrial disaster could occur in our country. The enactment of comprehensive right to know legislation may be a major potential legislative mechanism working against the possibility of such a disaster. The law should specifically recognize that persons possibly at risk of chemical contamination should have the right to know about the risk of harm and the right to decide whether they wish to assume the risk. In the absence of adequate information about chemical hazards, persons at risk of chemical-related harm will be unable to make reasonable, informed decisions about prevention and compensation. Industry, government, and other possible sources of chemical contamination and waste should therefore be legally obligated to provide comprehensive right to know information to possible-affected persons.

Awareness of information about the identity and possible toxicity of chemical contaminants and wastes may be of particular value to the medical community. Right to know legislation may offer physicians an invaluable information resource with possible applications in research, the practice of preventive medicine, and the diagnosis and treatment of acute intoxication as well as chronic occupational disease.

Many state legislatures have recognized the potential value of right to know laws. At least 21 states now require that workers be told about the hazards of materials they are handling (11). California, Connecticut, Delaware, Florida, Illinois, New York, Oregon, and West Virginia are selected states which have enacted right to know laws. In some instances, states have passed right to know laws which extend right to know protection to workers as well as members of the general public. Pennsylvania, New Jersey, and Iowa are selected states which have passed right to know laws specifically including community-oriented provisions.

Alaska is among the states which have acted responsibly by enacting right to know legislation. Alaska's right to know law is contained in Chapter 60 of the Alaska Statutes Supplement (2). Alaska further has occupational safety and health standards pertaining to the right to know about chemical hazards in the workplace (1). The standards are intended to comprehensively address the issue of evaluating and communicating information about chemical hazards to employees in Alaska.

Alaska's right to know law and standards provide a broad-ranging program for chemical disclosure. Chemical manufacturers or importers must assess the hazards of chemicals which they produce or import. All employers in the state must provide information to their employees about the toxic or hazardous substances they may be exposed to by means of hazard communication program, labels and other forms of warning, material safety data sheets, and information and training.

"Employer" is defined in the standards as person engaged in a business where chemicals are used, or produced for use or distribution. "Employee" is defined as a worker employed in a workplace but not in a place used primarily as a personal residence. "Toxic or hazardous substance" is defined in the standards as: (1) a chemical listed in section 4, Article 1-4, Alaska Occupational Safety and Health Standards; (2) a chemical listed in "Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment." American Conference of Governmental Industrial Hygienists; (3) a substance for which a material safety data sheet is required under OSHA regulations; and (4), a substance determined by the Alaska Department of Labor, in accordance with the Administrative Procedure Act (A 44.62) to be a health hazard to an employee who is exposed to the substance, including a carcinogen, reproductive toxin, irritant, corrosive, sensitizer, hepatotoxin, nephtrotoxin, neurotoxin, agent that acts on the hematopoietic system, agent that damages the lungs, a cutaneous hazard and an eye hazard.

Chemical manufacturers and importers shall evaluate chemicals produced in their workplaces or imported by them to determine if they are hazardous. Employers are not required to evaluate chemicals unless they choose not to rely on the evaluation done by the chemical manufacturer or importer of the chemical.

Various communication mechanisms are utilized by the Alaska right to know law and standards. Effective November 25, 1986, a written hazard communication program must be developed and implemented for workplaces. The program must include information specified in the standards, including: a list of the hazardous chemicals known to be present using an identity that is referenced on the appropriate material safety data sheet; the methods the employer will use to inform employees of the hazards of non-routine tasks and the hazards associated with chemicals contained in unlabeled pipes in their work areas; and the

methods the employer will use to inform any contractor employers with employees working in the employer's workplace of the hazardous chemicals their employees may be exposed to while performing their work. The written hazard communication program must be made available, upon request, to the employees.

Labels are a communication mechanism used by the Alaska right to know legislation. Effective November 25, 1986, the chemical manufacturer, importer or distributor shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged or marked with information specified in the standards, including the indentity of the hazardous chemicals, appropriate hazard warnings, and the name and address of the chemical manufacturer, importer, or other responsible party. With limited exceptions, each container of hazardous chemicals in the workplace must be labeled, tagged, or marked with information identified in the standards, including: identity of every hazardous chemical contained in the workplace, and appropriate hazard warnings. Portable containers into which hazardous chemicals are transferred from labeled containers and which are intended only for the immediate use of the employee who performs the transfer need not be labeled.

Material safety data sheets are a further communication mechanism for right to know protection in Alaska. "Material safety data sheet" means written material concerning a hazardous chemical which is prepared in accordance with requirements identified in the standards. Chemical manufacturers and importers shall obtain or develop a material safety data sheet for each hazardous chemical they produce or import. Employers shall have a material safety data sheet for each toxic or hazardous substance which they use. Each material safety data sheet must contain information specified in the standards, including: the indentity used on the label, physical hazards of the hazardous chemical, the health hazard of the hazardous chemical, primary routes of entry, any generally applicable precautionary measures for safe handling and use, any generally applicable control measures, emergency and first aid procedures, the date of preparation of the safety data sheet, and the name, address and telephone number of the chemical manufacturer, importer, employer or other responsible party preparing or distributing the material safety data sheet. Copies of the material safety data sheets must be readily accessible to employees.

The availability of information about workplace chemical hazards may be of limited value if affected persons lack the training and education to take full advantage of the available information. The Alaska right to know legislation wisely provides for employee information and training. Employees must be provided a safety education program.

Although right to know legislation may be a potentially valuable information source for physicians, it may also serve as a possible source of legal liability (12). The failure to obtain information under the right to know provisions, which might be of value in the diagnosis and treatment of acute and chronic health problems, may possibly be a basis of legal liability. On the other hand, the use of the right to know provisions, and possible resulting divulgence of "confidential" information, may also be a potential basis of liability. In the process of gathering clinical data, physicians may inadvertently release confidential "trade secret" information of a company. The area of possible legal liability of physicians in connection with the use of right to know legislation raises many important, and unsettled, questions. For instance, if a physician learns about a potential health menace through the use of right to know legislation, to whom may the information be released? Will a company be able to require a physician to omit toxicity data from a patients chart on the ground that the pertinent information is a "trade secret," possibly conferring a competitive advantage to the company? Another potential question is whether physicians will hesitate to use right to know laws because of fear of possible liability?

Trade secrets and confidentiality are discussed in the Alaska right to know standards. "Trade secret" means any confidential formula, pattern, process, device, information or compilation of information, including chemical name or other unique chemical identifier, which is used in an employer's business, and which gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. The standards specify that the chemical manufacturer, importer or employer may withhold the specific chemical identity, including the chemical name and other specific identification of a hazardous chemical, from the material safety data sheet, if certain conditions are met. The conditions are: the claim that the withheld information is a trade secret can be supported; information contained in the material safety data sheet concerning the properties and effects of the hazardous chemical is disclosed; the material safety data sheet indicates that the specific chemical identity is being withheld as a trade secret; and the specific chemical identity is made available to health professionals, in accordance with provisions specified in the standards.

In a situation where a treating physician or nurse determines that a medical emergency exists and that the specific chemical identity of a hazardous chemical is necessary for emergency or first aid treatment, the chemical manufacturer, importer or employer shall immediately disclose the specific chemical identity of a trade secret chemical to that

treating physician or nurse, regardless of the existance of a written statement of need or a confidentiality agreement. However, the chemical manufacturer, importer, or employer may require a written statement of need and confidentiality agreement as soon as circumstances permit.

In a non-emergency situation, a chemical manufacturer, importer, or employer shall, upon request, disclose a specific chemical identity which otherwise might be withheld as a trade secret to a health professional providing medical or other occupational health services to exposed employees if certain requirements, specified in the standards, are met. These requirements include: the request is in writing; the request described with reasonable detail one or more of a list of occupational health needs specified in the standards for the information; the request explains in detail why the disclosure of the specific chemical identity is essential; the request includes a description of the procedures to be used to maintain the confidentiality of the disclosed information; and the health professional and the employer agree in a written confidentiality agreement that the health professional will not use the trade secret information for any prupose other than the health needs asserted.

If the health professional receiving the trade secret information decides that there is a need to disclose it to the Alaska Occupational Safety and Health Section, the chemical manufacturer, or importer or the employer who provided the information shall be informed by the health professional prior to, or at the same time as, such disclosure.

If the chemical manufacturer, importer, or employer denies a written request for disclosure of a specific chemical identity, the denial must: be provided to a health professional within 30 days of the request; be in writing; include evidence to support the claim that the specific chemical identity is a trade secret; state the specific reasons why the request is being denied; and explain in detail how alternative information may satisfy the specific medical or occupational health need without revealing the specific chemical identity. The health professional whose request for information has been denied may refer the request and the written denial of the request to the Alaska Occupational Safety and Health Section for consideration. The Alaska Occupational Safety and Health Section will then consider the evidence to determine if: the Chemical manufacturer, importer or employer has supported the claim that the specific chemical identity is a trade secret; the health professional has supported the claim that there is a medical or occupational health need for the information; and the health professional has demonstrated adequate means to protect the confidentiality of the pertinent information.

Since as many as 50 million Americans may have been exposed to hazardous chemicals, it is important to include community-oriented provisions in a right to know law. The inclusion of community-oriented provisions would be one specific way of possibly strengthening the effectiveness of the Alaska right to know law and standards. The Pennsylvania Worker and Community Right to Know Act, for instance, recognizes that employees, their families, and the general public have a right to know the identity of chemicals they may be exposed to, the potential health hazards that exist, and the symptoms that may be experienced because of exposure (13). The law declares that employees and the general public often are in the best position to discover serious health problems, provided that they are aware of the chemical identity and the nature of the substances they may be exposed to. The law recognizes specifically that employees, their families, and the general public have an inherent right to know about the known and suspected health hazards which may result from exposure to hazardous substances, so that they may make knowledgeable and reasoned decisions with respect to the continued personal costs of their employment or residence in a particular place and need for corrective action.

A "hazard communication" was published in the Federal Register on November 25, 1983 (3). The federal hazard communication requires chemical manufacturers and importers to assess the hazards of chemicals which they produce or import. All employers having workplaces in the manufacturing division must provide information to their employees about hazardous chemicals by means of hazard communication programs, including labels, material safety data sheets, training, and access to written records.

The federal hazard communication does an inadequate job of protecting the public health from harms possibly associated with exposure to chemical hazards. The range of chemicals covered by a right to know law is a major factor affecting the potential effectiveness of the law. The federal communication explicitly covers only about 600 substances (8). In contrast, right to know laws in various states cover regulated substances ranging from 300 to almost 30,000 in number (12). The range of industries covered is a further factor substantially affecting the potential efficacy of a right to know law. In 1978, workers in manufacturing accounted for less than 30% of total employment (7). The federal communication covers about 14 million workers in 300,000 manufacturing establishments (14). However, an estimated 60 million workers are left unprotected (15). According to the government's own estimate, only 54% of chemically-related occupational illnesses in 1981 occurred in manufacturing (8) .

The federal communication is intended specifically to preempt any state law pertaining to communicating information about chemical

hazards to workers in manufacturing. This raises an issue of possible preemption, in whole or part, of state right to know legislation in Alaska and elsewhere. The issue of possible preemption will probably be decided ultimately by the courts. A major lawsuit, in fact, has been filed in the United States Court of Appeals for the Third Circuit by a Coalition of groups, including the Public Citizen Health Research Group. The suit charges in part that the federal communication is arbitrary and capricious for failing to provide adequate information to workers about hazards in the workplace (16). This lawsuit has been joined by several states, including Illionois, New York, and Massachusetts. The case was argued before a panel of the Court on March 18, 1985; decision is pending.

Right to know legislation plainly raises issues of major social consequence which may have an important effect on physicians. The medical community should therefore become active in the development of responsible legislation in this area. One area of possible reform is the enactment of state right to know measures which specifically recongize that the general public has an inherent right to know about chemical hazards they may be exposed to. Another area of possible change involves the highly-diluted federal communication. There is a need for a revitalized, more comprehensive federal hazard communication. In particular, right to know protection should be extended to all possibly-affected persons, and should cover all potentially harmful substances. Also, the federal communication should be changed so that it will not possibly preempt state right to know laws which may be realtively more protective of the public health.

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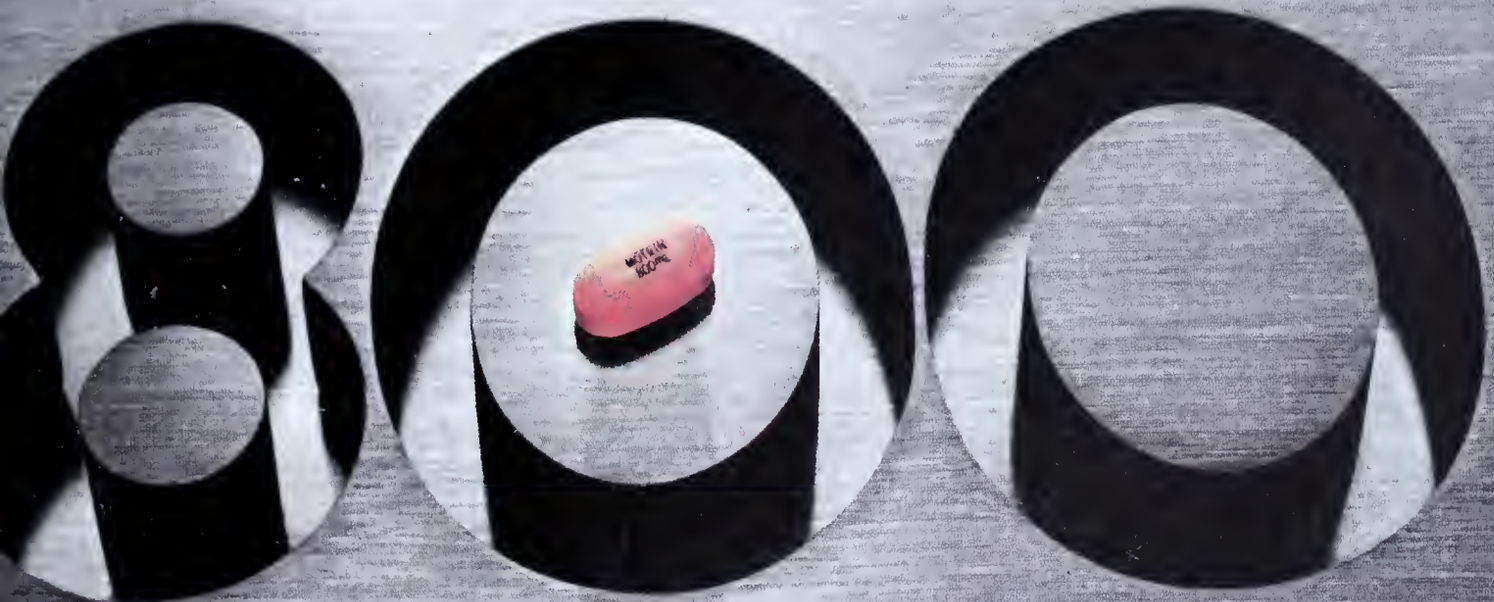

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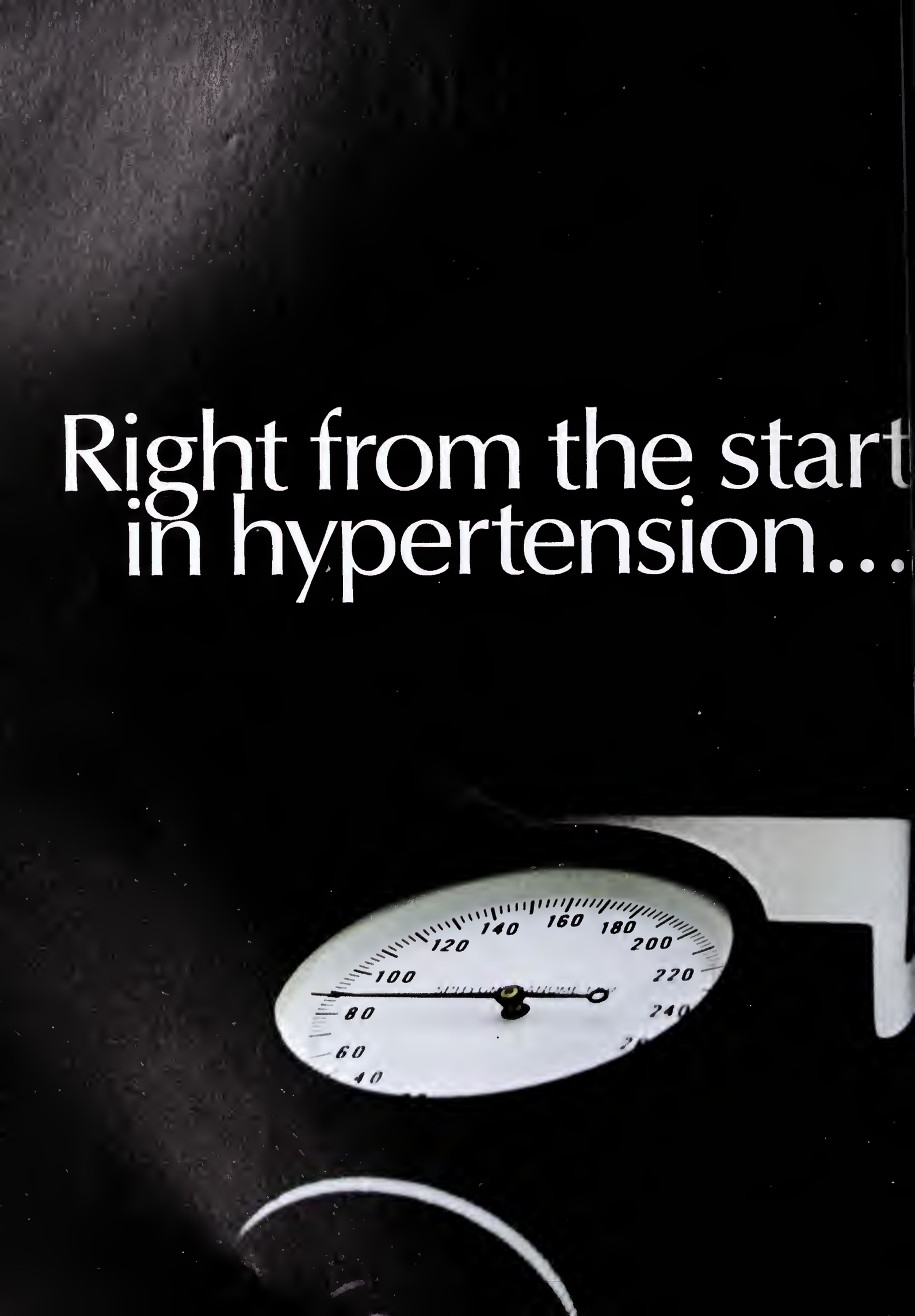

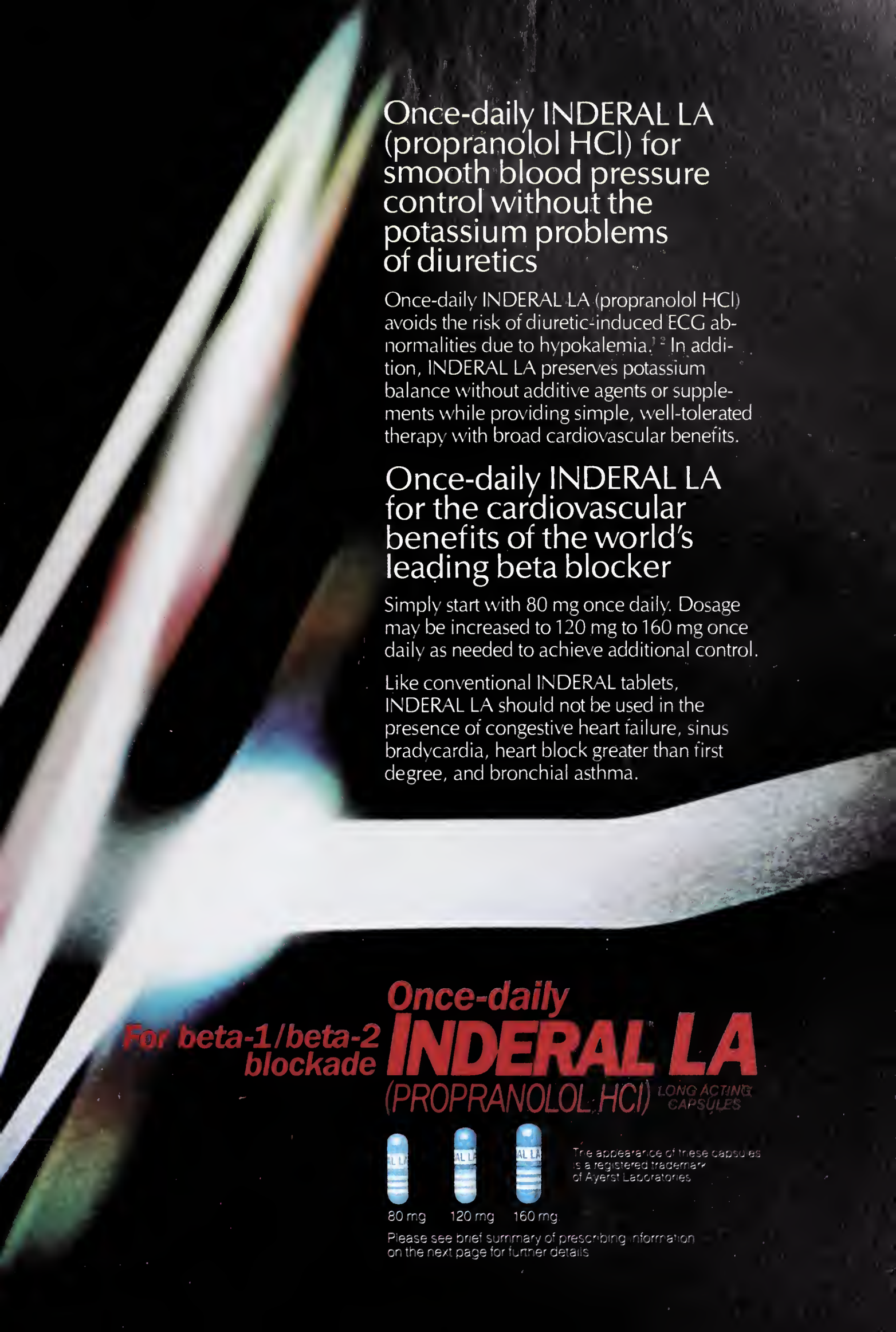

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Once-daily INDERAL LA (propranolol HCl) avoids the risk of diuretic-induced ECG abnormalities due to hypokalemia.[1,2] In addition, INDERAL LA preserves potassium balance without additive agents or supplements while providing simple, well-tolerated therapy with broad cardiovascular benefits.

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For beta-1/beta-2 blockade

Once-daily INDERAL LA

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80 mg 120 mg 160 mg

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Please see brief summary of prescribing information on the next page for further details

Once-daily For beta-1/beta-2 blockade INDERAL® LA (PROPRANOLOL HCl) LONG ACTING CAPSULES

The appearance of these capsules is a registered trademark of Ayerst Laboratories.

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)— PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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IF IT'S WAR - WHO IS THE ENEMY?

Dr. Milo Fritz' recent essay prompts considerable reflection. Certainly the options of such a long-time observer of the Alaska Medicine scene deserve attention. Dr. Fritz exorts his fellow MD's to "war against optimetric usurpation of the MD's well-earned perogatives". He further notes that one chiropractor has already sued and lost the suit for hospital privileges. At this writing, with the capitulation of the Illinois Medical Society, it would appear that at least one chiropractor or group of chiropractors, has won a suit in the battle for hospital privleges. One need only to consider the proliferation of alternative medical persons to realize that significant changes are upon us. Optometrists, podiatrists, chiropractors, nurse practitioners, nurse anesthetists, nurse midwives, medex's, physician's assistants, psychologists, medical social workers, lay midwives and naturopaths are all groups of individuals who bring or report to bring alternative medical services to the medical care market place. The traditional hospital-based or hospital-affiliated private practice MD's are not even safe from members of their own ranks. Urgicenters, Surgery Centers, ambulatory care centers, Birthing centers, intermediate care facilities, extended care facilities, all in themselves represent further alternatives to traditional fee for service hospital-affiliated private practice. It would seem that if indeed this is a war, it is certainly a war that is global in character. While I do not doubt that war on occasion may have a noble and laudatory purpose, I do think it's important to know the enemy in advance of the battle. Prior to beginning this war, perhaps we would ask, "Just who is the enemy? How large are their numbers? What makes them our enemy?" Are these our friends, neighbors and fellow citizens, or are these some renegade remnants of an aggressor nation? Or, to borrow an old and well-worn phrase, could it be that "We have seen the enemy and it is ourselves?"

The observation that in a free market place a need will soon be filled is well known to many. Perhaps we should ask ourselves, "What is the need that prompts such a proliferation of alternative medical services?" Could it be that the public at large and individual citizens in particular are not satisfied in one sense or another with the medical care provided to them by traditional medicine? Are we to believe that all the individuals who seek alternative medical care are duped, ignorant and unread? Or could it be that they have found something that satisfies their immediate medical needs in a manner or for a price that betters that offered by traditional medicine? What is the egregious action of which the alternative medical personel are guilty? Where stand the lines of maimed, misbegotten, mistreated individuals so wrongly managed by these alternative medical sources? Are those lines any less long than those created by traditional medical practices? There must exist a disparity of information, a disparity of facts, or a combination of both. On its face it seems apparent that these individuals would not exist and be in practice if they didn't have patients who voluntarily went to them and paid the asking price.

Perhaps a bit of introspection is indicated. Would you be happy with your $3,300.00 bill for your son's unindicated, 8-hour admission to a local hospital for arthroscopic surgery of his knee? Would you be pleased if your wife's prenatal care were managed by a para-professional for delivery done by a doctor she had never met, and your bill sent by a physician whom your wife thought she consulted but never saw in the course of her pregnancy? Can you be proud of a profession in which there exist members who will not see a Medicaid patient regardless of the nature or extent of the patient's illness? Are you happy with surgeons who recommend operations to their patients that they themselves will not endure? If the answer to some of these questions disturb you, then perhaps we've come closer to knowing the enemy. I would agree with Dr. Fritz that there should be a war, or at least a call to action, but perhaps the goals should be constructive rather than destructive. Perhaps the course should be progression rather than regression. Perhaps we would provide leadership rather than reaction. Rather than sniping at those individuals who try to do it differently, perhaps we should show by example how it should be done properly. We should recognize that there is no vote so powerful as those who vote with their feet. Many of our patients have left us for what they perceive to be greener pastures. We should reflect on this unspoken but concrete criticism and respond to it appropriately. If there is a need, let's fill it. If there is a problem, let's solve it, and let's quit throwing mud at those who do it differently.

The Alaska State Medical Association provides just such an opportunity. Dr. Fritz points out that Airline pilots pay over 6% of their yearly salary in dues to the Airline Pilots' Association. If we look about ourselves, we will discover that the Airline pilots aren't the only ones who take their organization seriously. Ask the chiropractors, the optometrists, the dentists, the truckers, the electricians, what they pay in dues to their organizations. You may well be surprised at the answers. There exists amongst our fellow MD's an

amazing phenomenon. If the State Medical Association takes an action or holds an opinion which is contrary to their own, their immediate response is to quit. Such a reflex reaction as "I don't agree with your philosophy, I resign", seems hardly appropriate for individuals so supposedly secure and well educated. If you don't agree with who is elected President or Governor, do you resign from the United States? A more rational response would have us exert even more of our energies and spend more of our time trying to direct or influence the philosophy or action with which we are in disagreement. If you don't agree with the actions of the State Medical Assocition, don't quit, come to the meeting and change the action.

David A. McGuire, MD
President, ASMA

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The Physician As Expert Witness

Most physicians genuinely enjoy doing what physicians do best: practicing medicine. Sooner or later, however, by mail, or by telephone, or by court messenger, there may come a quiet beckoning. The doctor may be required to testify in a case which, directly or indirectly, raises issues of medical malpractice. The tranquility of the practice may be seriously disrupted as the physician is transported from the security of familiar settings into the harshness of judicial proceedings. In that foreign land, the doctor will no longer be a comforter, a healer, or a trusted confidant. Instead, the physician will be a mere repository of information, around whom a struggle will swirl. Depending upon the breadth and nature of the physician's knowledge, one or another protagonist may seek to extract, to modify, to discredit, or even to exclude potential testimony.

The specter of involvement in a malpractice proceeding is disconcerting, at best. Worse yet is the possibility that by testifying in a proceeding (such as a worker's compensation matter) the doctor may be unwittingly giving testimony, under oath, which may later be used in a malpractice case.

Many doctors are irritated, impatient, angry or hostile any time they must testify. Many are confused by the shifting allegiances in multi-party litigation. Insecurity may largely strip away a previously well camouflaged fear. The physician may feel isolated-cast adrift on a shakey raft, amid a feeding frenzy of litigious sharks.

An understanding of the judicial process, coupled with a protocol to follow when testimony is requested can eleminate or reduce the potential for self-destructive responses, and can help to produce a legal record which is clear and unambiguous.

This article is the first of a two-part series, which will consider several topics, ranging from the filing of a complaint, to the demeanor of the doctor in court. It will cover such specifics as the technical requirements of subpoenas, and generalities such as locations for depositions. While it will not address all of the topics which may face a doctor who has been called to testify, it should serve as an anxietyolytic exploration of those most important to the Alaska physician.

Physicians are seldom called to testify at or about the time that the events in question have occurred. Generally, there is a gap of years between the occurrence of an event and the request for testimony. Usually, much has transpired during those years. The condition of a given patient may have changed dramatically, and a small army of medical care providers may have become involved with the patient. Litigation may have been commenced, terminated, and rebegun. Actions may have been commenced before one tribunal, solely to allow the taking of testimony which would be difficult or impossible in another tribunal. All of this may be unknown to the person whose testimony has been requested. The careful doctor, then, will want to have at least a rudimentary knowledge of the underlying dispute resolution process, so that rational decisions can be made regarding the giving of testimony.

A civil judicial action is commenced in Alaska by the filing of a complaint. The complaint may be a rather simply worded document which indicates that somebody (called the "plaintiff") has a claim against somebody else (called the "defendant"). The complaint will go on to state the nature of the claim, and will establish the type of relief sought by the plaintiff. It need not be very detailed; it will be legally sufficient if it mearly puts the defendant on notice as to the nature and extent of the claim.

After the complaint has been served, the defendant - usually thourgh an attorney - will either have to answer, show a pretty compelling reason why no answer is required, or lose the case. The overwhelming number of defendants answer, and do so promptly.

The corollary of the simple requirement of "reasonable notice" for complaints, is extended to answering defendants. Because any allegation in the complaint not specifically denied is deemed admitted, most defendants deny most allegations most all of the time. And they do so with virtually no explanation as to the reasons for the denials.

At this point, therefore, most cases are in the following posture: A plaintiff has provided enough detail to let a defendant know that the plaintiff is plenty upset, to the tune of a very large number of dollars. The defendant has answered by denying everything of substance in the complaint, without explaning why. Neither side has produced one iota of evidence on anything, but each side is looking down the road at a trial which will have to determine the presence or absence of every material fact at issue.

Following this initial phase, which is the judicial equivalent of the process of acute inflammation, most cases enter a phase of remission. Every now and then a lawyer will file a motion for some type of relief, but by and large, most actions will remain quiescent for a period of several months.

At some point, a trial setting conference will be held, and a judge or other judicial officer will assign a trial date. The date may be one or more years off, but the assignment of the date will generally spark a phase of truly concerted activity by all of the parties.

Trials are a process in which facts are determined, and laws are applied to those facts. As previously mentioned, at this state of the proceeding virtually nobody knows what the "facts" are. Consequently, with the prospect of a trial looming on the horizon, at-

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torneys will begin a deliberate effort to discover what evidence is available.

Whether articulated or not, every good trail attorney knows that the truth is irrelevant in our system of justice - it is the evidence that counts. Nobody wins or loses a case based on "truth"; people win or lose cases based on evidence. Truth, presumable, is immutable; evidence is subject to rules, and to interpretation. The only evidence which can be considered by the trier of fact is evidence which the judge has allowed to be admitted into evidence. Once admitted, it is subject to any reasonable inferences.

Every good trial lawyer is, in part, a good story teller. At times the story will be told through the words of witnesses, and at times through the words of the attorney. Every word, though, will be part of the story. To the degree possible, each lawyer will try to manipulate the scripting of the tale, now by introducing evidence, now by objecting to the introduction of evidence. The trial lawyer knows that it matters not whether the fable is fact or fiction - it matters only whether it can be presented in an enticing way to a jury.

It is against this background that the attorneys will continue their work after the trial setting conference. Perhaps for the first time, they will begin contacting potential witnesses. They will be seeking technical information, and they will be assessing the characteristics of those they interview.

A physician contacted at this point will typically know little or nothing about the underlying case, unless the physician is a defendant in the actioin. Even if the doctor knows the patient was injured, say, in a motor vehicle accident, the doctor can only guess at the status of the legal action. How many parties are there? Who are they? Have allegations of physician misconduct been made, or might they be made later in the course of the proceedings? It is a rare doctor who has this information when the lawyers first call.

For a doctor to participate meaningfully in any legal proceeding, the doctor must have a basic knowledge of the underlying case. That knowledge can most readily be obtained from an attorney involved with the case. For that reason, when the first contact occurs- whether by telephone, letter or subpoena-the doctor is generally best served by immediately speaking with the lawyer. Naturally, if the physician has even the slightest reason to suspect that his or her actions could become a matter of scrutiny, the first call should be to the risk or claims manager of his malpracitce insurance company.

A telephone call to the attorney will allow the physician to quickly get at least a superficial grasp as to what the lawyer is seeking to learn. Usually, first meetings are most profitably conducted face-to-face. If the attorney is well known to the physician, a more extended telephone conference may be all that is required to educate the physician about the under-lying aspects of the case. When in doubt though, a chance to look the lawyer in the eye to assess his or her apparent honesty and sincerity is most valuable.

Wether articulated or not, every good trail attorney knows that the truth is irrelevant in our system of justice it is the evidence that counts.

The only evidence which can be considered by the trier of fact is evidence which the judge has allowed to be admitted into evidence.

Lawyers pretty much expect to have to travel to the physicians' offices for such meetings, and the doctor can usually schedule the conference for a convenient time. Suprisingly, this is often the case even after a subpoena has been served.

The doctor may use the meeting to closely question the attorney as to whether any physician is a potential defendant in the case. A negative response by the attorney should be briefly noted, and saved. If at any point there is even a hint that the physician may become a defendant in ANY case, the physician should immediately contact his or her attorney or insurance carrier. "Immediately" means "immediately". There is nothing wrong with taking a break from a conversation with an attorney- or a deposition, for that matter - to place a call to a trusted risk management adviser. Statements made in one proceeding can come back to haunt a physician in another proceeding; a period of silence while an attorney or risk manager is being consulted can save hours of fruitless explanations at a later date.

The vast bulk of attorney / physician interactions do not involve malpractice actions. Nevertheless, defendants find more than mere solace in numbers: every fellow traveller may potentially dilute the financial responsibility of the others. When in doubt, the doctor should con tact his attorney or insurance carrier.

Lee S. Glass, M.D., J.D. — has addressed numerous groups on risk management including the international College of Surgeons and the Department of Orthopedics, University of Washington School of Medicine. Glass practices law with Faulkner, Banfield, Doogan & Holmes in Anchorage and Seattle. He is also obtaining postgraduate medical training at the University of Washington.

History Of Medicine In Alaska

The Alaska State Medical Association Auxiliary decided at its annual meeting in June 1984 to undertake a collection of resources for a history of medicine in Alaska. Since this time, members and physicians have been requested to recall their experiences specifically during the past 25 years. This seemed a fitting plan at the time of the celebration of the Silver Anniversary of Alaska Statehood.

During the past year, forms soliciting such information were sent to all physicians. The Auxiliary was pleased with the response of some 200. With this beginning, at the 1985 annual meeting, the Auxiliary decided to expand the gathering of resources.

We welcome additional responses from physicians and spouses. Especially helpful will be suggestions regarding contact with individuals who have knowledge of medical events prior to statehood. All information may be sent to the ASMA office - 4107 Laurel St., Anchorage 99508, directed to the Auxiliary.

The information provided has been so varied and interesting that the Auxiliary, with the support of Alaska Medicine, will provide this page culled from the responses.

ASMA Auxiliary
Gwynneth Wilson, Ed.

To initiate this project is the following narrative by Jon Reiswig, M.D. who practices orthopedics in Juneau. He first came to Alaska in 1967 for a locum tenens. He returned permanently in 1973. He and his wife, Susanne, have four children.

"I was called into the Emergency Room one night, back in the days when, even though we were in speciality, there was no E.R. coverage, and we had to cover all patients who came through the door at Bartlett Memorial Hospital.

I had been called to examine two patients. One was a very lively, talkative, and uninhibited gentleman under the influence of alcohol. Following my exam, and leaving him on the gurney, I went on to my next patient. This was a young 14 or 15 year old girl who was a heavy smoker. I sent the youngster to X-ray, obtaining a chest film. I reviewed it and determined that she had pneumonia. I went out to discuss it with her mother.

The mother was sitting in the waiting room just beyond the door of the E.R. She was asleep and also under the influence of alcohol. She had brought a dog with her directly into the hospital waiting room.

In an attempt to talk with her about her daughter's diagnosis, I went up to awaken her. Each time I would get near her the dog would start after me and I would step back. This see-saw battle between me and the dog went on for sometime. I don't recall how I finally did get her awake. I brought her in the E.R. where I explained to her what her daughter's diagnosis was.

Upon hearing this, the mother became very concerned and tearful especially in view of the fact that she had had another child die in the past.

Meanwhile, back in the adjacent cubicle, the intoxicated gentleman, upon hearing this conversation, suddenly bolted out from behind the curtain. He was stark naked. Throwing his arms around the distraught mother, he said, 'I'm so sorry'. Whereupon, she looked up and said to him, 'I'm sorry too'.

We finally were able to get him back behind the curtain and onto the gurney. Eventually, the youngster recovered. I never saw the gentleman again."

37th ANNUAL AAFP CONVENTION

Family Physicians

LEARNING TODAY
FOR TOMORROW

1985 CONGRESS OF DELEGATES
TUESDAY, OCTOBER 8—THURSDAY, OCTOBER 10

1985 SCIENTIFIC ASSEMBLY
THURSDAY, OCTOBER 10—SUNDAY, OCTOBER 13

SPECIAL FAMILY EVENTS
WEDNESDAY, OCTOBER 9—SATURDAY, OCTOBER 12

ANAHEIM CALIFORNIA

President's Page

The much repeated phrase, "There is nothing so constant as change", certainly applies to the practice of medicine today. Most of us are weary of the parade of acronyms brought forth to describe and implement many of those changes. With a growing sense of frustration we wonder why "they" won't just leave us alone to practice "good" medicine in the fashion to which we've become accustomed. Without repeating the litany of reasons that "they" aren't going to leave us alone, we can conclude that change is upon us wether we like it or not.

Short of leaving the country or the pracitce of medicine, there are but three responses. We can ignore change, fight the change or attempt to direct the change by appropriate active involvement. I submit to you that the latter is the only course which bears any remote chance of success.

There are going to be changes in reimbursement mechanisms. Fee-for-service practice of medicine will survive in the short run and probably in the long run, but IPA's, HMO's, PPO's and corporate medicine are not going to go away tomorrow. Any who believe that their practice will be completely unscathed by such entities are surely deluding themselves.

Involvement of corporate medicine in our practices will surely increase not decrease. More and more, business practices, marketing concepts and various competitive modalities will become the topics of our conversations. Physicians who have not had to compete for patients will find themselves doing so. The methods by which some choose to compete will no doubt be abhorrent to others. Nevertheless, the FTC amongst others will certainly ensure that all "reasonable" methods of competion will be allowed. Blatant overt unadulterated advertising will occur. Perhaps we had best learn to call it "information sharing" so that at least it will be sufficiently palatable to discuss.

Changes of an ever more fundamental nature will also occur. Who gets care and when? How much care and how much cost? Inpatient, outpatient, whose patient or even if they are a patient will be topics of discussion. The prospect of change has been well presented by many and should be apparent for all to see. We needn't go on to prove the point; rather we should spend our time discussing our response to change.

In the past we have frequently been so involved in the practice of medicine that our best efforts were often no more than a criticism of actions affecting doctors which were taken by those who were not doctors. Recently that position has begun to change. Organized medicine has made proposals for change in regards to boxing and smoking as well as drug and alcohol consumption. But it is not enough that doctors are involved with society only in matters relating to public health; we must seek positive changes in the practice and delivery of medicine. We must be more involved politically, economically and socially amongst the communities in which we live. Physicians have a unique perspective on many issues which ought to be shared with society as a whole.

To those ends the Alaska State Medical Association is responding. The ad-hoc committee on tort reform will begin to gather information and to form favorable alliances with others adversely affected by insurance costs. With good fortune something favorable may be accomplished.

The ad-hoc committee on IPA's will present a report to the fall council meeting. Dr. Robert Burnette who has great experience with the formation and operation of IPA's will present his views as well.

The Public information committee will begin to develop an active program of press releases, public service announcements and other information programs to let the public better understand what we do.

Obviously all of these programs require time and money. For both we need the support of our members. Dues represent an important part of the Association's income. Every effort is being made to enhance non-dues income. Travel expense and other discretionary budget items have been and will be carefully reviewed. Your dues monies will be spent carefully. New members allow us to do programs we could not otherwise undertake.

Committee work takes time and energy and there is no immediate monetary reward. In the long run there is a reward if we can continue to practice medicine to the mutual satisfaction of doctor and patient.

The Association needs your support. If you don't agree with the direction of the Association come to present your views to change it. Withdrawing your support from the Association because you don't agree with its direction and policies not only harms the Association but will in the long run, be detrimental to your own interests as well. The Association needs you as an active member but if you can't be active at least be a member!

David A. McGuire, M.D.
President, ASMA

50,000 people will be saved from colorectal cancer this year. You can save one.

Save yourself! Colorectal cancer is the second leading cause of cancer deaths after lung cancer. More than 90% of colorectal cancers occur equally in men and women past age 50. Early detection provides the best hope of cure. That's why if you're over 50, you should take this simple, easy Stool Blood Test every year. The test kit is chemically treated to detect hidden blood in the stool and can be done at the time of your periodic health examination so your doctor will know the results.

Two days before the test, you begin a diet you might enjoy all the time. Plenty of fresh vegetables raw or cooked, especially corn, spinach and lettuce. Lots of plums, grapes, apples and prunes, moderate amounts of peanuts and popcorn. No red meat, turnips or horseradish. Do's and don't's are listed in the kit.

The presence of hidden blood usually indicates some problem in the stomach or bowel, not necessarily cancer. Positive tests must be followed by further testing to find out what the problem is.

Other tests for colorectal cancer you should talk to your doctor about: Digital rectal exam (after age 40); the procto test (after age 50). It is important to report any personal or family history of intestinal polyps or ulcerative colitis, and any change in your bowel habits, which could be a cancer warning signal.

The American Cancer Society wants you to know.

Kaimen Norman Ng

AMERICAN CANCER SOCIETY®

ADOPTED RESOLUTIONS OF ASMA

HAINES, ALASKA - 1985

Adopted By the Alaska State Medical Association House of Delegates at Its Annual Meeting in Haines, Alaska June 7, 1985

Resolution No. 85-1
Subject: Salute to Joseph Rude, M.D.

Whereas,Dr. Joseph Rude has recently celebrated his 90th birthday, and has also marked the milestone of 56 years of the practice of medicine in Alaska; and

Whereas, Joe Rude has enjoyed 64 years of devoted marriage to Amy, and this union has produced 4 children and 11 grandchildren, and 5 greatgrandchildren; and
Whereas, "Doc" Rude has been an extremely active member of a wide variety of community groups, having been on the Board of his Lutheran Church for numerous years, been active in the Boy Scout movement for 50 years, and the Salvation Army Board for 40 years, a charter member of the Juneau Lions Club, and a member of the school boards in both Petersburg and Juneau; and

Whereas, in addition to the practice of medicine in Alaska, Dr. Rude has served the missions of the Lutheran Church; and

Whereas,"Doc" continues to be an active skier at Eaglecrest, continues to bag moose each year up the Taku River, and until recently, captained the "Doughboy" on numerous cruises; therefore be it

Resolved, that the Alaska State Medical Association salutes Dr. Rude on his many milestones; and be it further

Resolved, that the Alaska State Medical Association wishes him well and Godspeed with his continuing activities; and be it yet further

Resolved, that the rest of us will try to do better.

Resolution No. 85-3
Subject: Use of Pesticides

Whereas, some pesticides are highly toxic to humans and other non-target organisms, and

Whereas, the inappropriate use of some pesticides may endanger the public health, and

Whereas, present State regulations
-have not been revised in ten years,
-contain no guidelines for application of unrestricted pesticides,
-are silent regarding qualifications for commercial operators,
-are not specific regarding authority for search and seizure,
-provide no authority to ban specific compounds from use in Alaska,
-do not require registration of pesticides used in Alaska,
-directions for use on labels, therefore be it

Resolved, that the Alaska State Medical Association urges the Governor to appoint a task force to include representatives from the Alaska State Medical Association, Department of Environmental Conservation, Department of Health and Social Services, Municipal Health Departments, and other appropriate groups and agencies to review and, if necessary, to develop new regulations regarding the application of pesticides in urban and rural settings.

Resolution No. 85-4
Subject: Community Right-To-Know

Whereas, hundreds of thousands of gallons of hazardous substances are released into Alaskan Air, lands and water by hundreds of documented industrial and transportation accidents each year (1); and

Whereas, residents and entire communities may be exposed to these accidentally released hazardous substances and physical agents as a result of industrial and transportation accidental release of hazardous substances or physical agents; and

Whereas, the public health can be best served by a preventative approach whereby members of the general community, emergency responders, and health care providers have adequate information regarding the existence and identity of hazardous substances and physical agents in their communities; and
Whereas, several states and municipalities have adopted or are considering for adoption community right-to-know legislation including New Jersey, Cincinnati, San Diego, New York, Connecticut, and Massachusetts (2); Therefore be it

Resolved, that the Alaska State Medical Association supports the establishment of statewide and local community right-to-know legislation with at least the following elements:

a. Mandatory reporting by employers in the form of a standard material safety data sheet (MSDS) to a public agency such as the health department or fire department of all toxic material physical agents which may be stored, manufactured, utilized, produced as a by product, transported to or from, or otherwise found at any time on the property or right of way of any enterprise or site; and

b. Full access by the general public, health care providers, and emergency responders to this public information; and

c. An associated educational program for employers, the general public health care providers, emergency responders, and public health professionals and officials; and

d. Sufficient funding for the legislation to be fully effective.

(1) Based on data provided the Alaska Health Project by the Alaska Department of Environmental Conservation.
(2) Worobec, MR, et al., Chemical Right-To-Know Requirements: Federal and State Laws and Regulations - A Status Report. Bureau of National Affairs: Washington, D.C., 1984.

Resolution No. 85-6
Subject: Three Wheelers and Similar All Terrain Vehicles

Whereas, the use of three-wheeler, all-terrain vehicles by children and adults has contributed to unnecessary deaths and injuries in the State of Alaska; and

Whereas, the medical cost of 538 injuries over a period of two years exceeded $1.6 million dollars and the cost of institutional care for those 6 brain damaged Alaskans injured in all-terrain vehicle accidents will exceed $11.5 million if they live to age 65; and
Whereas, measures such as educational safety programs and mandatory helmet requirements have reduced injuries associated with bicycles, motorcycles, and snowmobiles; and

Whereas, Alaska has documented some of the most serious problems among all the states on this subject; therefore be it

Resolved, that the Alaska State Medical Association urges the passage of legislation:

(1) To require helmet use by all operators of ATV's and
(2) To require ATV registration, and
(3) To require successful completion of a mandatory safe driving course for all ATV drivers 16 years of age and younger, and be it further

Resolved, that the Alaska State Medical Association urges the Department of Health and Social Services to commit additional funds and professional positions to increase its efforts to investigate and prevent injuries in Alaska.

Resolution No. 85-9
Subject: Consulting Corporation

Reslove, that the Alaska State Medical Association further investigate the formation of a Consulting Corporation for broadly defined services to the business community and the professional community and the public at large, and "with specific recommendations reported to the winter council meeting."

Resolution No. 85-11
Subject: Dues Discount

Resolve, that the Alaska State Medical Association reduce an active member's dues by $50 if dues are received by the office before January 1 of each year; and be it further

Resolved, that Alaska State Medical Association reduce an associate member's dues by $25 if dues are received by the office before January 1 of each year.

Resolution No. 85-13
Subject: Extension of medicare Fee Freeze Regulations

Whereas, the medicare Fee Freeze was instituted in the face of voluntary action already being done by the AMA and physicians, and

Whereas, such federal regulations interfere with the proper patient-physician relationship; therefore be it

Resolved, that the Alaska State Medical Association oppose Health Care Financing Administration regulations which label as fraud physician benevolence to needy medicare patients; and be it further

Resolved that the Alaska State Medical Association opposes the extension to the Medicare Fee Freeze regulations as a threat to the availability of medical

care for, and the freedom of choice of the elderly and disabled.

Resolution No. 85-14
Subject: Unified Membership (Local, State & National Medical Organizations)

Whereas, unified Membership in organized medicine tends to increase the credibility of the organizations involved; and

Whereas, unified membership more equitably distributes the burden of fiscal requirements of members of these organizations; and

Whereas, unification improves communications and coordination of activities; and

Whereas, unification would triple Alaska representation at the national (AMA); and

Whereas, unification would increase revenue to the ASMA from the AMA; and

Whereas, unification would reduce the AMA dues of members of unified societies by 10%; therefore be it

Resolved, that the membership of the ASMA be offered the chance to unify at the local, state and national level by an appropriate by-law ammendment to be presented no later than annual meeting 1986.

Resolution No. 85-15
Subject: Infant Mortality

Whereas, Northern Alaska Health Resource Association Report concludes infant mortality rate in Northern Alaska, especially in rural, native, teen community, and

Whereas, they are prompting use of rural lay midwife birthing centers, and

Whereas, Fairbanks Medical Association is not convinced the use of midwives will cause a further decline in death rate, therefore be it

Resolved, that the Alaska State Medical Association appoint a special committee to respond to conclusions reached in the Northern Alaska Health Resource Association Reports 1985 on infant mortality.

Resolution No. 85-17
Subject: Thanking The Speakers

Whereas, all of the Speakers have succeeded nobly in stimulating us and have been very informative as well, therefore

Be It Resolved, that the Alaska State Medical Association thanks each speaker for his/her contribution toward making our 40th Annual Meeting a success.

Resolution No. 85-18
Subject: Thanking Citizens of Haines

Whereas, the City of Haines is in a glorious setting, and

Whereas, the city itself is the result of the magnificent efforts of the citizens themselves, and

Whereas, the Haines Women's Club baked special rolls, breads, entertained, and

Whereas, Joan Snyder was responsible for a marvelous Women's Club dinner, and

Whereas, the Haines Borough School District, their teachers, principals, superintendent have made monetary contributions, furnished copying machines, facilities, video taped sessions, worked in preparation for the Fun Run, led the Mt. Riley hike, in particular were the efforts of Ellen Larson and Terry Sharnbroich, and

Whereas, Allen Heinrich has worked with the transportation along with the hotels and Chip Waterbury, and

Whereas, Kirk Ramseyer and Allen Henrich worked with the arrangements for the magnificent Boy Scouts and their luncheon at the Elks Lodge, and

Whereas, Larry Fry and Wendy McPheters led hikes and coordinated the kids activities, and

Whereas, the Klondike Goldrush and Historic Park Service gave an excellent presentation and tour in Skagway, and

Whereas, Lee Heinmiller worked behind the scenes on the sound system, lighting, exhibitor assistance and arrnagements at the Chilkat Center, and

Whereas, Jan McPheters coordinated with the Auxiliary, ASMA staff for all children's activities, assisted in video taping, Boy Scout dinner, babysitting arrangements, cooking for the Women's Club dinner and numerous other details, and

Whereas, Lib Hakkinen hosted the Women's luncheon activities in the museum, entertained the children with special relics, artifacts and eagle movies, and

Whereas, the radio station interviewed speakers, advertised events and gave excellent radio coverage

and

Whereas, Ray Menaker furnished special newspaper coverage, mouse acts, and entertainment with the "Lust for Dust", and

Whereas, Dan Minusken and Kent Greentree provided excellent music for the President's Banquet, and

Whereas, the Drama Group entertained all with the "Lust for Dust" presentation, and

Whereas, the Chilkat Dancers opened our meeting with superb tales of the past, and

Whereas, the shop owners and restaurants in Haines have made special contributions, and

Whereas, the hotels have been very accommodating, in particular Joyce at the Hotel Halsingland, Gwen at the Eagle's Nest, Gale at the Captain's Choice, Cecelia and Bea at the Thunderbird, Norm at the Bed & Breakfast and Mimi Greg at the Condos, and

Whereas, last but not least, Chip Waterbury has been a magnificent support for a multitude of detail arrangements, for the Fairweather cruises, for supplying exhibit tables, coordination with hotels, prepared signs for shops around town, furnished brochures and information on activities, and countless other arrangements, in general a resource for all; therefore be it

Resolved, that the Alaska State Medical Association express it's sincere appreciation to the Citizens of Haines for all their acts of friendship in hosting the 1985 ASMA Convention.

Resolution No. 819
Subject: Thanking The Exhibitors

Whereas, the success of the Alaska State Medical Association Convention relies greatly on the support and contributions from exhibiting companies and their representatives; therefore be it

Resolved, that the Alaska State Medical Association sincerely thank the pharmaceutical and other companies for their exhibits and contribution toward making our 40th Annual Meeting a success.

Resolution No. 85-20
Subject: Thanking Chip Waterbury

Whereas, Chip Waterbury, Tourism Director of Haines labored well and diligently to aid the Alaska State Medical Association Annual Meeting in enjoying a memorable and successful event; be it

Resolved, that the Alaska State Medical Association thanks Chip Waterbury for all of his efforts and arrangements which help so much in making the 40th Annual Meeting a resounding success.

Reslоution No. 85-20
Subject: Thanking Dr. Stan Jones and Pat Jones

Whereas, Stan Jones, M.D. and Pat Jones lobbied and labored diligently to have the Alaska State Medical Association Annual Meeting in their beautiful community a memorable and successful event and

Whereas, both have been involved in every step of the entire convention, from the initial idea, through extensive arrangements, and planning with the ASMA staff, containuing with hands-on, hard work, special errands, special fishing trips, and finally minute-by-minute shepherding of those attending the convention through a busy, useful and enjoyable schedule; therefore be it

FRIENDS OF MEDICINE

Rarely physicians in the medical community become impaired, be it from alcohol, drugs, emotional illness or senility. ASMA through the Friends of Medicine has established means to help deal with problems of such individuals. If you know of any physician in need of assistance please call the ASMA office at 562-2662. Help rendered early in the course of many illnesses may prevent irreversible damage.

ASMA CONVENTION 1985
HAINES, ALASKA

Speakers and Special Guests

John H. Bond, Jr., M.D. - University of Minnesota, School of Medicine, Veterans Administration Medical Center, Minneapolis, MN (Internal Medicine and Gastroenterology)

Rod Bradley - Murray Bradley Advertising, Inc. Anchorage, Ak

George E. Brannen, M.D. - The Mason Clinic, Department of Surgery, Section of Urology and Renal Transplantation, Seattle, WA (Urology)

Kenneth Cooper, M.D., MPH, - President and Founder, The Aerobics Center Dallas, TX (Preventive Medicine)

Millie Cooper - The Aerobics Center Dallas, TX

Sam Flint - American Academy of Pediatrics, Chicago, IL

Robert Higgins, M.D. - President, American Academy of Family Physicians, Bremerton, WA (Family Physician)

Jack Jacobs, M.D. - Providence Hospital, Anchorage, AK (Neonatology)

Hollis K. Lefever, M.D. - ACCME Committee, Lewiston, MT (Family Physician)

John Middaugh, M.D. - Department of Health and Social Services, Division of Public Health, Epidemiology Office, Anchorage, AK (Epidemiology and Internal Medicine)

Merle Pennington, M.D. - ACCME Committee, Oregon Health Science University, Portland, OR (Family Physician)

Harrison L. Rogers, Jr., M.D. - President-Elect American Medical Association, Atlanta, GA (General Surgery)

Rick Ruben - President, Alaska Health Care Cost Management Coalition, Anchorage, AK

Jill Silverman, MBA - Manager, Loss Prevention Department, Medical Insurance Exchange of California, Oakland, CA

Marianne Wieland - Sand Lake Studio, Anchorage, AK

Exibitors

Alascom Inc.
Alaska Association of Medical Assistants
Alaska Biomedical Services, Inc.
Alaska Medical Network
Ayerst Laboratories
Boehringer Ingelheim, Ltd
Bristol Laboratories
Burroughs Wellcome
Geigy Pharmaceuticals
Glaxo Pharmaceuticals
I. C. Systems, Inc.
Lederle Laboratories
McNeil Pharmaceuticals
Mead Johnson Pharmaceutical Div
Medical Support Services
Merck, Sharp, Dohme
Merrell-Dow
Northern Medical and Surgical, Inc.
Ortho Pharmaceutical
Parke-Davis
Pennwalt Prescription Div
Physicians Medical Laboratories
Roche Laboratories
A. H. Robins
William H. Rorer
Schering Corporation
Scientific Supply and Equipment, Inc.
Searle Laboratories
Smith, Kline and French Laboratories
E. R. Squibb and Sons
State of Alaska - Center of Disease Control
Syntex Laboratories
The Upjohn Company
U. S. Air Force
U. S. Army

Other Contributors

Eli Lilly
Haines Borough School District
Physicians Reference Labs

I wish to express the appreciation of the Alaska State Medical Assiciation to these Companies and their Representatives for their support and participation in our 40th Annual Convention.

Sincerely,

Keith Brownsberger, M.D.
President

David McGuire, M.D.
President-Elect and Program Chairman.

FUN RUN RESULTS

AAFP FUN RUN

HAINES, ALASKA — JUNE 8, 1985

PLACE	NAME	CITY/STATE	TIME
1.	Larry Otto, M.D.	Yukon, Canada	23:25
2.	Larry Olsen	Kodiak	24:16
3.	Hal Brackett	Anchorage	24:42
4.	McCoy Taylor	Haines	25:51
5.	Nadine Price	Haines	26:05
6.	John Hall, M.D.	Anchorage	26:05
7.	Keith Brownsberger, M.D.	Anchorage	26:51
8.	Kurt Heinrich	Haines	27:29
9.	Stan Jones, M.D.	Haines	28:51
10.	Karl Heinrich	Haines	29.06
11.	Ronnie Christensen	Fairbanks	29:25
12.	Murray Clayton	Haines	29:40
13.	Craig Loomis	Haines	30:08
14.	Sam McPhetres	Haines	30:32
15.	Ken Cooper, M.D.	Dallas, TX	30:36
16.	Marlene Swift	Haines	30:48
17.	Shawn Horning	Anchorage	31:02
18.	Ron Christensen, M.D.	Fairbanks	31:33
19.	Nancy Morden	Haines	31:36
20.	Jacqueline Middaugh	Anchorage	31:39
21.	Aaltje Smith	Anchorage	31:39
22.	Matt Hein	Anchorage	32:12
23.	Gayle Thieman	Fairbanks	32:15
24.	Terry Sharnbroich	Haines	32:19
25.	Lyle Huff	Haines	32:20
26.	Scott Gilbert	Haines	32:41
27.	Anne Boyce	Haines	32:52
28.	Tim Samuelson, M.D.	Anchorage	33:10
29.	Dan McGuire	Kirkland, WA	33:33
30.	Mike Eberly	Haines	33:39
31.	Declan Nolan, M.D.	Anchorage	33:43
32.	Alice Samuelson	Anchorage	34:03
33.	Kathleen Flegel	Haines	34:04
34.	Leo Hauser	Anchorage	34:22
35.	Gary Gunnels	Seattle, WA	34:59
36.	Morris Horning, M.D.	Anchorage	35:40
37.	George Hale, M.D.	Anchorage	35:47
38.	Myron Bloom, M.D.	Ketchikan	35:49
39.	Steven Tucker, M.D.	Anchorage	37:25
40.	Dick Flegel	Haines	37:28
41.	Tryon Wieland, M.D.	Anchorage	37:30
42.	Jane Hall	Anchorage	37:43
43.	Heather McNaughton	Hawaii	38:08
44.	David McNaughton, M.D.	Hawaii	38:08
45.	Jan McPhetres	Haines	38:11
46.	Andrew Swift	Haines	38:14
47.	Tara Heinrich	Haines	38:40
48.	Steve McPhetres	Haines	38:40
49.	Claudia Eberly	Haines	39:06
50.	Wendy McPhetres	Haines	39:10

51.	Marianne Wieland	Anchorage	39:17
52.	Dick Witt, M.D.	Anchorage	39:19
53.	Diana Edwards	Haines	40:08
54.	Jill Gates	Anchorage	40:12
55.	Carson Weller	Carbondale, CO	40:52
56.	Anne O'Dell	Haines	42:05
57.	Nancy Schnabel	Haines	42:05
58.	Keri Edwards	Haines	42:23
59.	Jim Ellison	Portland, OR	42:35
60.	Robert Tsigonis	Fairbanks	42:58
61.	Jean Tsigonis, M.D.	Fairbanks	42:58
62.	Millie Cooper	Dallas, TX	43:06
63.	Pat Jones	Haines	43:23
64.	Elizabeth Elsner, M.D.	Ester	43:55
65.	Scott Christensen	Fairbanks	44:43
66.	Blake McNaughton	Hawaii	47:08
67.	Suzanne McNaughton	Hawaii	47:09
68.	Robert Elsner	Ester	47:40
69.	Ira Kaiser	Palm Harbor, Fl	48:05
70.	Rebecca Hallgarth	Haines	48:20
71.	Barbara Waterbury	Haines	48:20
72.	David Swift	Haines	50:49
73.	Ben Swift	Haines	51:00
74.	Irene Swift	Haines	53:00
75.	Paul Swift	Haines	53:00
76.	Bernard Gerard, M.D.	Valdez	54:28
77.	Peter Hansen, M.D.	Kenai	54:28
78.	Sally Brownsberger	Anchorage	55:18
79.	Marion Witt, M.D.	Anchorage	55:19
80.	Bruce Giltbert	Haines	55:31
81.	Karolee Hansen	Kenai	60:30
82.	Nannette Howard	Haines	63:57
83.	Doris Applegarth	Haines	63:58
84.	Jean Smith	Haines	65:21
85.	Bonnie Sharbroich	Haines	65:30
86.	Alice Morden	Haines	65:45
87.	Ken Vallem	Iowa	67:03
88.	Geneva Vallem	Iowa	67:15
89.	Mary Ellen Ramseyer	Haines	71:00
90.	Mary Price	Haines	72:30

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AUXILIARY NEWS

ASMA Auxiliary Report

The big question facing auxiliaries today has to do with whether or not we are relevant in our society. While most spouses of physicians are involved in pursuit of their own areas of interest, we are also closely involved with the health needs of the community in which we live. The medical auxiliary is the vehicle through which we can support health projects, legislative efforts, concerns and awareness when it involves medical issues, and help provide financial support to medical schools and students

In recent years the auxiliary has worked to shake some of the old images. "Doctors wives" teas with all the trappings of wealth probably never existed to the extent some would have us believe. Now our auxiliary boast a membership of 80,000 physician spouses, both men and women.

The auxiliary we join today is the largest volunteer organization in the country. Last year alone, within local chapters, over 6,000 community health projects throughout the nation were sponsored. There were 574 programs for older Americans; 1,988 health education programs; 570 programs for children and youth; 315 screening programs, and so on. In addition, auxiliaries raised $1.8 million last year for AMAERF (Education and Reasearch Foundation).

Within the state of Alaska, the impact of the state auxiliary has been felt through development of the car seat loaner program and through successful lobbying efforts to mandate safety restraints.

Throughout the upcoming year, the state auxiliary will work in communities on an organ donor awareness program. There will be a continuation of the history project and increased efforts to provide scholarship money. We will continue to examine issues and our role in meeting community health needs.

By paying our national dues ($15) we are able to tap into top quality programming information that is useful to members in all areas of volunteer involvement. The Project Bank Catalog contains 650 projects with the program outline that has been developed by state and county auxiliaries. There is excellent material on communication, fundraising, and volunteer development. Catalogs are available free of charge with complete listings for printed material on hundreds of subjects as well as audio and video cassettes and films. During the upcoming year, the state auxiliary will attempt to help members utilize these resources.

Medicine is changing, the auxiliary is changing and society is changing. We need to stop periodically and ask the question, "Are we still relevant?" The medical auxiliary in Alaska is strong, vital and eager to meet the challenge. Becoming a member of the local, state and national chapter is a good investment in a dynamic organization dedicated to promoting quality health care.

Auxiliary Educational Scholarship Program Expands

A major emphasis for auxiliary chapters across the nation is financial assistance to students who are working toward a degree in a medical or health related field. In Alaska there are two scholarships given each year through an application process initiated in the fall by a scholoarship committee. Sally Brownsberger is chairman for the 1985-86 year. The amount for the scholarships was increased for future scholarships from $750 to $1000 each at the convention in Haines.

Scholarships awarded for the upcoming year went to John Metcalfe Blair, Jr., a 21 year old Cornell graduate who will begin medical school in September. John is a private pilot with a float plane training and has been self-employed during the last several years as a taxidermist. At Cornell, John was a member of Alpha Epsilon Delta, a pre-health career honor and service society and was on the Honor Roll and Dean's List. John was a member of the first all-Scout expedition to the summit of

Ann Beth Rowland, a 17 year old from Palmer, Alaska, is the second winner of a $750 scholarship. She begins attending Witworth College to pursue a career in physical therapy. During her years at Palmer High School, Ann was President of the National Honor Society, captain of the varsity volleyball team and was selected as Most Valuable Student by the Elks Club.

Auxilians in Fairbanks made a major contribution to our state scholarship fund by hosting a series of dinner parties which raised a total of $1380.97. According to Alice Lundquist, creator of the project, the side benefit of getting people in the medical community together was enjoyed by all. A plan for "pocket dinners" will be sent out to auxilians throughout the state so that our efforts to establish a scholarship foundation can be realized.

On a national scale, the AMA Auxiliary has a scholarship program entitled AMA-ERF. This fund helps support quality education in the nation's medical schools. From modest beginnings in 1950, the AMA-ERF has distributed a total of over $40 million in gifts to medical schools and guaranteed over $95 million in loans to more than 40,000 medical students, interns and residents.

The Alaska State Medical Association Auxiliary is proud of our continued support of this major Foundation which funds medical education efforts throughout the nation.

Convention Report

At the state convention in Haines, Alaska, the following officers were elected:

President: Carolyn Crouch
President elect: Patrice Gerster
Vice President: Alice Lundquist
Secretary: Sue Smith
Treasurer: Susan Bowers
Treasurer elect: Aaltje Smith

Dr. Ken Cooper and Millie Cooper were dynamic and inspirational speakers. Everyone who heard them left with new resolve to improve ones physical fitness. Wide community participation was enjoyed in Haines. The Fun Run population swelled to 90, and community groups catered many of the meals. The salmon bake, the ferry trip to Skagway and the melodrama "Lust for Dust" were highlights of the trip.

For the Auxiliary, the convention has been the primary event for meeting together. It is always nice to get acquainted with other members and to act on our state projects.

The Marianne Wieland print and cookbook sales are very successful ongoing projects. The history project continues with additional auxilians taking active rolls in gathering and assimilating materials.

In formal action, the scholarship amount was raised from two $750 awards to two $1000 awards. Lorrie Horning was recognized for her outstanding work as state president during the past year.

Carolyn Crouch
President ASMA Auxiliary

Dear Auxiliary Friends:

As the 1984-85 year for me as President drew to a close, I reflected on the year as an exciting one, full of new learning experiences, many fun times, and numerous friendships. It was a year for consolidation of efforts and human resources among the Anchorage Society Members and the State Members-at-Large. We attempted to solidify and strengthen the two separate organizations and Boards to make the best use of time, energy, costs, enthusiasm, and accomplishments. Our combined newsletter and creatively designed letterhead by Marilyn Wilkins was an effort to bring members closer, promote an awareness of around the state happenings and a welcome for Members-at-Large to join the Anchorage activities whenever they were in Anchorage. Pat Jones from Haines attended the Fall Luncheon when National Auxiliary President Billie Brady visited.

The past year has had the greatest number of members in the history of the Auxiliary, 107 for Anchorage and 13 Members-at-Large. Congratulations everyone! Special thanks to Susan Bowers, Membership Chairman, for her new billing process. It was gratifying to see such tremendous support even though many members could not be fully active. Support with dues enabled those who could be active to carry on worthwile projects and goals of the organization.

We turned over the Management of PECABU, the Infant Seat Loaner Program to the two Anchorage hospitals and with our example, guidance, workshops, and consultation we have helped to build 8 other Infant Seat Loaner Programs throughout Alaska (Haines, being one of them). The Physician of the North History and Census Gathering Project celebrating the Silver Anniversary of Alaska Statehood is well underway and members from all over the state are contributing information. As a combined fund-raiser, we commissioned Anchorage artist and Auxiliary member, Marianne Wieland to compose an origional print, "Night Flight", for the exclusive sale by Auxiliary members. Television PSA's produced by the National AMA Auxiliary dealing with health tips are being distributed to stations in Anchorage and will then be passed on to other communities around the State.

Patrice Gerster, Anchorage President, and myself have had a full, cooperative, and rewarding year working togethr. Now we offer enthusiasm and support to both Carolyn Crouch (state president) and Terry Patterson (Anchorage President) in the pursuit of their ideas, goals and direction for their 1985-86 year with the Auxiliary.

My thanks to all the Board members the past year for their support and encouragement and for the opportunity to have been State President.

Lorrie Horning
Past State President

POST GRADUATE COURSES

October 17-20 Fourth National Seminar On Community Cancer Care. Hayatt Regency, Indianapolis, Indiana. For information write: Office of Continuing Medical Education, Methodist Hospital of Indiana, Inc., 1604 North Capitol Avenue, Indianapolis, Indiana 46202.

October 25-27 Diagnostic Radiology Update. Mandalay Four Seasons Hotel, Dallas, Texas. Fee $300, $175 for residents and fellows. CME 18 hours. For information write: Dolly Christensen, Director of Radiology Postgraduate Education, University of Texas Health Science Center, 5323 Harry Hines Blvd., Dallas, Texas 75235. (214) 688-2502.

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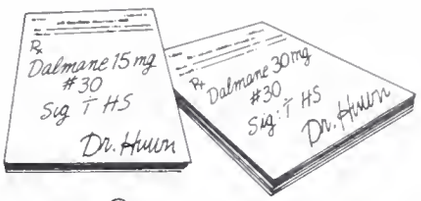

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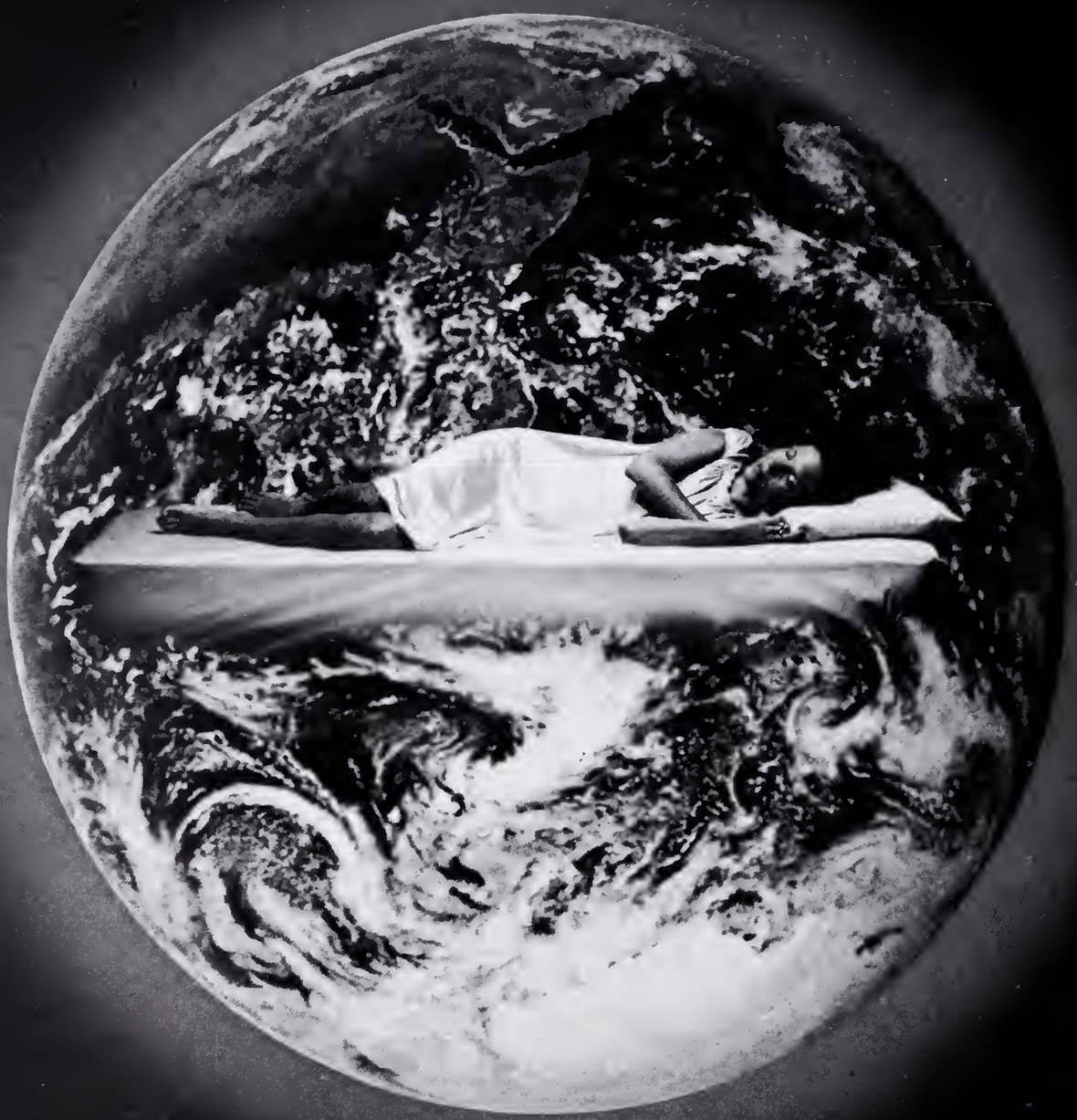

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October/November/December 1985

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ORIGINAL ARTICLES:

Radiation and Cancer in Alaskan Natives: Part 2
Charles D. Stutzman, M.D., Jennifer Williams, P.H.N., Anne P. Lanier, M.D., M.P.H. 86

ATLS: What is it?
George Longenbaugh, M.D., David W. Templin, M.D. 88

Uvulopalatopharyngoplasty, (UPPP), An Effective Surgical Treatment For Cases Of Snoring And Some Cases Of Sleep Apnea
David D. Beal, M.D. 90

Postnatal Intrafamelial Spread Of: Hepatitis B Infection In Alaksan Eskimo Infants
Elizabeth A. Tower M.D. 92

Prehospital Care And The Physician Intervener
John E. Hall, M.D. 98

FEATURES:

Alaska Medicine Essay
*Sanford A. Marcus, M.D.** 101

History of Medicine in Alaska
Gwynneth Wilson 107

President's Page
David A. McGuire, M.D. 108

Auxiliary News
Carolyn Crouch, Lorrie Horning 110

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About the cover: *Mt. Denali from Camp Denali* by William H. Bowers, M.D.

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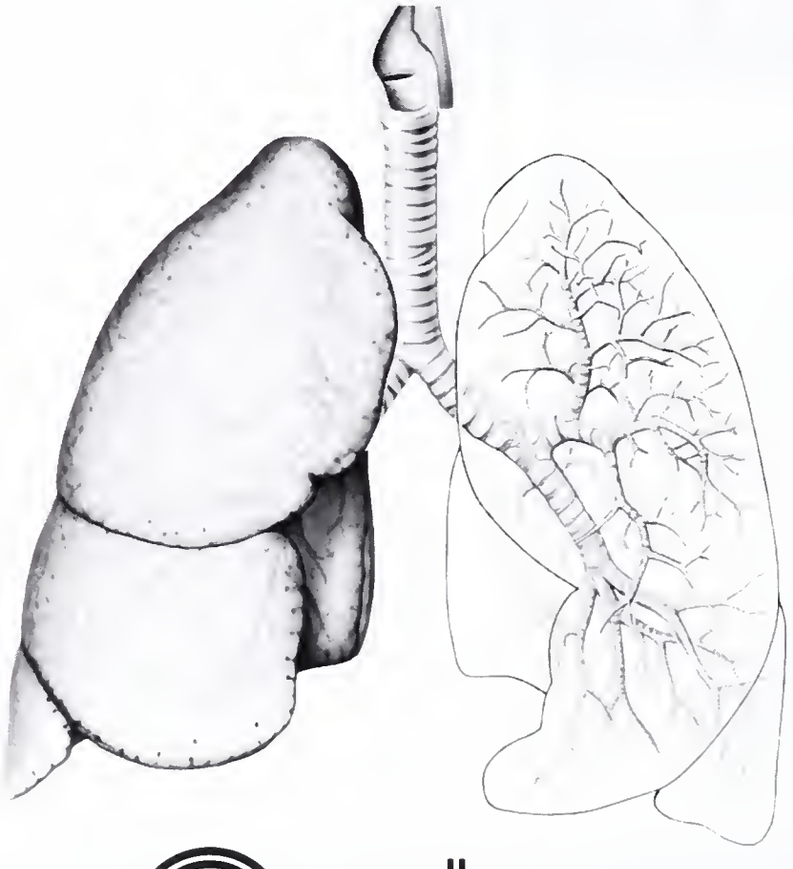

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Brief Summary Consult the package literature for prescribing information

Indications and Usage Ceclor* (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms

Lower respiratory infections including pneumonia caused by *Streptococcus pneumoniae* (*Diplococcus pneumoniae*), *Haemophilus influenzae* and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy particularly to drugs

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins and cephalosporins), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics Such colitis may range in severity from mild to life-threatening

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile* Other causes of colitis should be ruled out

Precautions *General Precautions* — If an allergic reaction to Ceclor* (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e g , pressor amines, antihistamines, or corticosteroids

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms Careful observation of the patient is essential If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly)

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor* (cefaclor, Lilly) There are however, no adequate and well-controlled studies in pregnant women Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

Nursing Mothers — Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses Average levels were 0 18, 0 20, 0 21, and 0 16 mcg/ml at two, three, four, and five hours respectively Trace amounts were detected at one hour The effect on nursing infants is not known Caution should be exercised when Ceclor is administered to a nursing woman

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established

Adverse Reactions Adverse effects considered related to therapy with Ceclor are uncommon and are listed below

Gastrointestinal symptoms occur in about 2 5 percent of patients and include diarrhea (1 in 70)

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment Nausea and vomiting have been reported rarely

Hypersensitivity reactions have been reported in about 1 5 percent of patients and include morbilliform eruptions (1 in 100) Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor Such reactions have been reported more frequently in children than in adults Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy No serious sequelae have been reported Antihistamines and corticosteroids appear to enhance resolution of the syndrome

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients)

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40)

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40)

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200)

[061782R]

Note Ceclor* (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever See prescribing information.

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RADIATION AND CANCER IN ALASKAN NATIVES: PART 2

Anne P. Lanier, M.D., M.P.H. [1]

Jennifer Williams, P.H.N. [2]

Charles D. Stutzman, M.D. [1]

Radiation continues to be implicated as a cause of apparent increase in cancer among Alaskan Natives. In a previous article, we reviewed the exposure of persons in the Alaskan arctic to radioactive fallout from atmospheric nuclear-weapons testing.[1] Exposure did not exceed population limits, and the amount of radiation that resulted would not be expected to cause a significant number of cancers. However, it was felt that the individual exposure data and cancer experience should be reviewed.

Since our first report, we have reviewed the radiation-measurement data from the village with the highest levels of radiation exposure and have examined the cancer incidence in that village and other villages in the North Slope Borough (NSB). Data on cancer incidence were available from the Centers for Disease Control/Indian Health Service cancer surveillance project and included all invasive cancers diagnosed among Alaskan Natives from 1969 to 1983.

Figure 1 shows the mean levels of whole body counts obtained from residents of three villages each year during the period of greatest atmospheric nuclear-weapons testing (1962-1967). The highest levels were among residents of Anaktuvuk Pass; lowest levels were in Point Hope residents. These figures were found to correlate with the extent to which caribou were utilized as food.

Six Anaktuvuk Pass residents developed cancer during the fifteen year period included in our study.

Residents of Anaktuvuk Pass did not develop significantly more cancers than residents of other villages when size of village is taken into consideration (Table 1). In addition, the types of cancers diagnosed in Anaktuvuk Pass were similar to those diagnosed in the rest of the borough. Cancers involving radiation-sensitive sites (bone marrow, thyroid, bone, breast) were not seen in excess, and some types were not seen at all.

Radiation measurements for individual residents were reviewed, as well as the current health status of all residents of Anaktuvuk Pass. The population of Anaktuvuk Pass was 99 in 1970 and 191 in 1980. Radiation measurements had been taken many times for most people, but at least once for 134 individuals. The current status of all 134 persons was determined; none were lost to follow-up.

For 95 of these 134 people, at least three measurements were made during the time of greatest exposure (1963-65). Averages of the three highest doses measured in that time period and adjusted for body weight (nanocuries per kilogram) are shown in Figure 2. Five of the six cancer patients had whole body counts recorded. Older persons had generally received higher doses of radiation. If the cancers were associated with radiation, the patients who developed cancer would have been among those who received the highest doses. This was not the case; the doses in cancer patients were similar to the doses received by others in their age group.

In conclusion, no data collected to date suggest that the cancer experience of individuals or groups exposed in the arctic to radioactive nuclear fallout differs from that of persons in less exposed areas. Attention on cancer in the arctic must be redirected toward preventing the cancers for which the cause is known—namely, cancer of the lung and other sites caused by cigarette smoking.

1. Arctic Investigations Laboratory, Center for Infectious Diseases, and Cancer Branch, Division of Chronic Disease Control, Center for Environmental Health, Centers for Disease Control, U.S. Department of Health and Human Services.
2. North Slope Borough Health and Social Service Agency, Barrow, Alaska.

Table I
Invasive Cancers for North Slope Borough Natives by villages, and Sex 1969-83

Village Native pop 1980	Kaktovik 148*		Barrow 1720		Wainwright 372		Nuiqsut 181		Anaktuvuk 191		Pt. Hope 434	
Site	M	F	M	F	M	F	M	F	M	F	M	F
Nasopharynx			2	1								
Stomach			3	1	2				1		1	
Colon			4	2	1			1	1	1		2
Rectum			2				1		1			1
Pancreas			1									
Upper GI			1									
Lung	1		7		1		2				2	
Hematologic			2	1								
Skin			1									
Bladder			2									
Kidney			1			2						
Brain			1									
Lymph Nodes			1						1			
Gallbladder				2							1	1
Cervix				3				1				2
Ovary						1						
Salivary gland						1						
Esophagus				1								
Breast				1						1		
Liver												1
Unknown		1	2	4		1	1					
Subtotal	1	1	30	16	4	5	4	2	4	2	4	7
Total	2		46		9		6		6		11	

*Native population in 1980

See figure 1 and figure 2 on next page.

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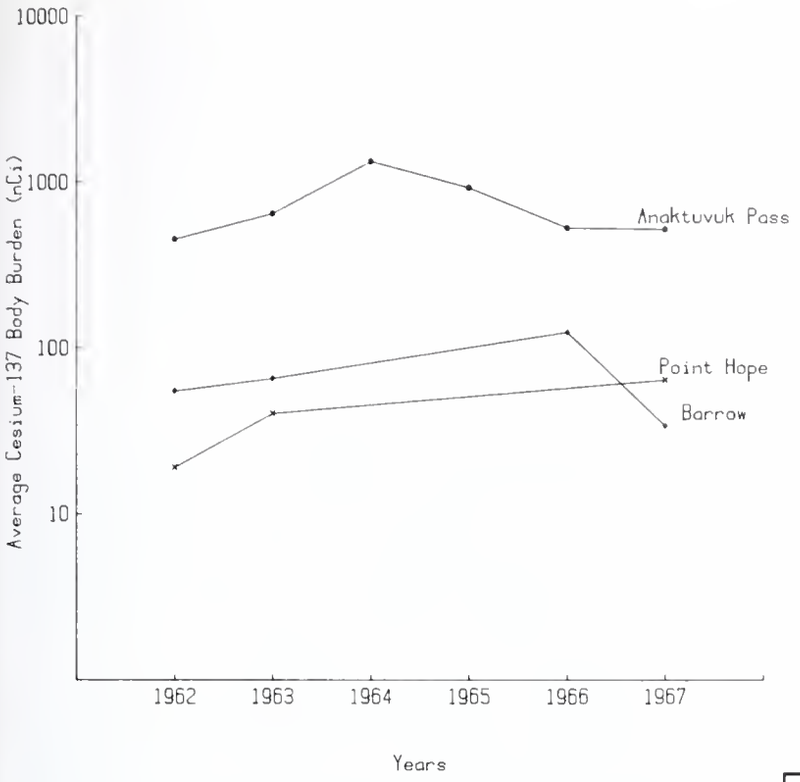

Figure 1. Average cesium-137 body burdens (nanocuries) in residents of three communities in the North Slope Borough during the time of greatest nuclear fallout.

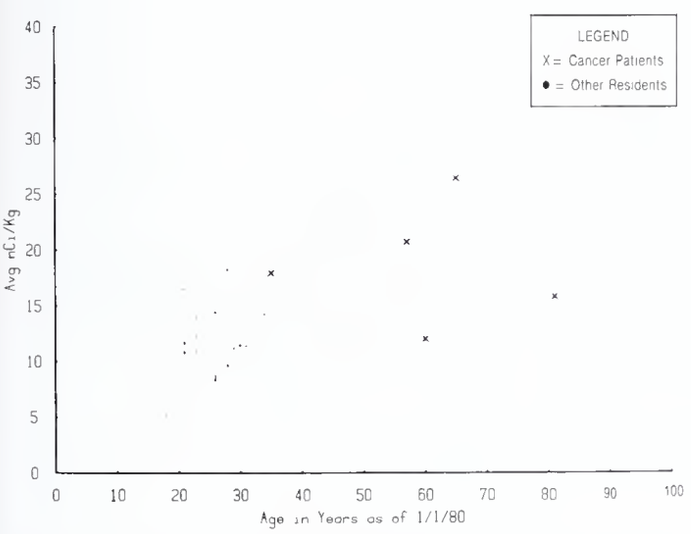

Figure 2. Average of three highest radiation levels measured (nanocuries/kilogram) in individual residents of Anaktuvuk Pass 1963-65.

ATLS: What is it?

David W. Templin, M.D.

George Longenbaugh, M.D. (Deceased)

For a program to be jointly sponsored and administered by a state funded nonprofit organization, a native regional health corporation, a physicians professional organization, and a federal health agency, may seem strange. That the project resulting from this consortium should be a successful means of reducing mortality and morbidity among residents of Alaska might, indeed, appear difficult to believe.

Advanced Trauma Life Support training, a sixteen hour course developed and strictly monitored by the Amercian College of Surgeons, has been taught in Alaska with eleven of the seventeen courses arising through the cooperation of such a consortium. Cook Inlet Native Association (CINA), a native health corporation, Southern Region Emergency Medical Services (SREMS), a nonprofit organization, and the Alaska Native Medical Center (ANMC), a federal hospital, in cooperation with the American College of Surgeons Committee on Trauma (ACS), have trained 98 Alaskan physicians with the result that most of the hospitals in "bush" Alaska and most of the emergency rooms throughout Alaska, have physicians specifically trained to respond to trauma. Training by this consortium is not the only ATLS training which has been carried out in Alaska. Five courses have been held in Sitka and one in Fairbanks with other sponsorship. Most of the physicians in Southeast Alaska were trained at Sitka.

The American College of Surgeons recognized a deficiency in physician training and ability to respond to trauma, and in 1978 adopted the ATLS course developed by the Lincoln Medical Education Foundation and field tested in Nebraska. (1)

Aware that the maintenance of high quality in the training depended on vigilant control of the educational process, the ACP not only developed the training, but they train all the course instructors and authorize and monitor all courses. (2)

Instructors are almost entirely Alaskan surgeons, although occasionally a guest instructor from the "lower '48" participates. Anchorage surgeons from private practice and members from the staff of the Alaska Native Medical Center do most of the training.

The actual courses, consisting of 16 plus hours of instruction, laboratories, and hands on experience, have been held at the Greater Anchorage Area Borough (GAAB) Fire Training Center and occupy a full Saturday and Sunday. During the intensive two-day course of lectures, dog labs and skill stations, the physician students learn (or re-learn) the philosophy and skills necessary for rapid, accurate, management of patients with extensive trauma. Each student performs cricothyroidotomy, peritoneal lavage, pericardiocentesis, venous cut down and chest tube placement. Students also demonstrate skills in evaluation and management of patient simulations. Instruction includes emphasis on when and what to refer and encourages development of referral with Referral Centers and surgical specialties.

Priority for training has been given to physicians in the hospitals and clinics who have emergency room responsibilities. At the present, all the physicians at the Alaska Native Health facilities (hospitals and clinics outside of Anchorage) and those facilities primarily serving Alaskan Natives have been trained. Training has been offered also to all emergency room physicians and to physicians working in facilities in Alaska where a surgeon is not available.

Alaskan residents or tourists suffering major trauma in "bush" Alaska have a greatly increased chance of being cared for by physicians trained to deal with major trauma.

The ACP, recognizing that the level of training

and care available in rural Alaska due to ATLS training is superior to that found in other rural states, honored George Longenbaugh, M.D., State of Alaska American College of Surgeons Committee on Trauma Chief, with an award.

ATLS training will continue. Any physician feeling that he or she is working in a situation which requires such training should contact Southern Region Emergency Medical Services at 274-3651 to inquire about classes.

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1. The role of the Committee: Advanced Trauma Life Support Course for Physicians.
2. Organizing and Conducting a Recognized ATLS Training Program: Advanced Trauma Life Support Course for Physicians.

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UVULOPALATOPHARYNGOPLASTY, (UPPP), AN EFFECTIVE SURGICAL TREATMENT FOR CASES OF SNORING AND SOME CASES OF SLEEP APNEA

David D. Beal, M.D., F.A.C.S.

Snoring to the degree that it is the cause of a social problem has been found to affect some 13,000,000 Americans (1). By a "social problem", we mean sleep noise which is so loud that it can be heard at least one room away and has caused an interfamily social adjustment where separate bedrooms are employed as a necessity for a continued relationship.

Most truly loud snorers have a constriction of the oropharyngeal airway when asleep. The principal causes of these constrictions are the soft palate and uvula (2,3,4,5). Some of these people who snore eventually progress to a periodic total airway obstruction with a devastating effect on their lives— the obstructive sleep apnea syndrome.

Snoring is basically the sound produced by excessive air turbulence resulting from a partial airway obstruction and when moderate or severe, it can be associated with increased respiratory effort and pulmonary hypertension (5,8). Snoring and sleep apnea occur, as has been shown during sleep stages 3 and 4 , by the oropharyngeal muscles becoming atonic and collapsing inward associated with a dropping down of the soft palate and uvula (4,5,9). The role played by the tongue is controversial and may be more important in some persons than in others (4). Prior to UPPP operations (4,10,11,12) these problems were often treated through the use of permanent tracheostomies with their inherent drawbacks (13) and occasionally with complex oral maxillo-facial surgical procedures (14,15).

Recently several papers have been written which demonstrate the effect of UPPP in patients with these syndromes. Fujita et al. (10,12) Were the first to apply Lematsie's (2) ideas to the treatment of the problem. They resected redundant mucosa from the lateral pharynx and uvula-palate of 12 patients with sleep apnea. Eight of these had previous tracheostomies, four of which subsequently had the tracheostomies closed. Simmons et al. (4) reported results on twenty patients with sleep apnea, eight of which had excessive snoring. His results were that 12 of 20 had good apnea results with improved sleeping oxygen saturation profiles, 5 others improved and 3 failed to be benefited and needed tracheostomies as well. Snoring, socially significant, was completely cured and although it occasionally continued to some degree it was now tolerated by the partner. Hernandez (11) reported the results on ten patients and claimed 100% success in curing apneas and snoring. I am now reporting on the results of 18 patients.

The technique of uvulo-palato-pharyngoplasty, (figures 1,2,3) was followed as described by Simmons (4) with the addition of using the CO2 laser as the tool of excision which dramatically reduces blood loss with precise removal of tissue and allows for a somewhat more sterile procedure than that described. Care was taken to advise patients that this was a new and only slightly tested procedure, that complications of regurgitation, hypernasality, infection, or subsequently oropharyngeal stenosis could occur and that results were not 100% successful in either the treatment of sleep apnea or snoring.

In the eighteen patients done only three had sleep apnea as demonstrated by the Simmons (4) tests suggested for evaluation of this syndrome, but all eighteen, sixteen men and two women were significant snorers.

The three patients with sleep apnea had successful results and no further procedures were necessary. Sixteen of the eighteen had successful reduction in snoring and enjoyed new social amenities. The two men who continued to snore did so in a modified and more tolerable manner. One spouse did complain that she was now frequently aroused by the quiet and had to check to see if her partner was alive.

Comment:

UPPP is an excellent operative solution for chronic heroic snoring and for some patients with sleep apnea, however criteria need to be developed to identify those apnea patients who will most benefit. Simmons et al. (4) suggested that those patients who snore loud enough to be heard one room away and have had their bed partner move elsewhere or if it is found they snore independent of position, (back, side or stomach) and are free of cardiac monitor change in a 24 hour period, should have the UPPP operation without sleep studies. Those patients with cardiac monitor or oxygen saturation changes should have extensive sleep apnea studies, i.e., pulmonary functions tests, polysomnogram, cardiac monitoring and oximeter studies until a specific test can be identified to separate apnea patients from those with significant snoring.

Certain individuals have been found less likely to benefit completely with UPPP, those with neurological diaphragm failure, marked obesity and some with mandibular hypoplasia however, UPPP is a new and exciting operation for the above syndrome and should be pursued to help those afflicted with these disease states.

Figure 1
The prominent enlarged uvula is noted centrally with the tonsil tissue in the area of the tonsillar fossa (arrow). Note the narrow oronasal airway A.

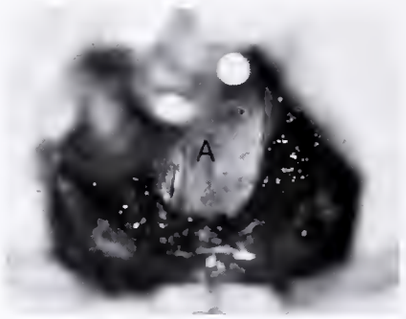
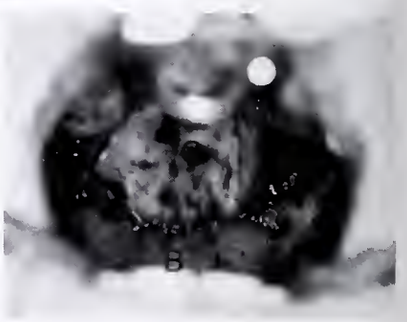


Figure 2
This shows the palat area following the resection of the uvula, the tonsils and the posterior ¼ of the soft palate. Note the enlarged oronasal airway A.

Figure 3
The palate and pharynx after repair. Tightening sutures laterally A, with repair of palate B. Note the markedly enlarged oronasal airway C.



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*"Cancer of the Colon and Rectum: Summary of Public Attitude Survey," *Ca* 33:359-365, 1983 (Nov.-Dec.).

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POSTNATAL INTRAFAMILIAL SPREAD OF: HEPATITIS B INFECTION IN ALASKAN ESKIMO INFANTS

Elizabeth A Tower M.D.

International studies by the World Health Organization have estimated that there are nearly 200 million carriers of hepatitis B surface antigen (HBsAg) in the world today, primarily in parts of Africa and Asia where carrier rates are frequently in excess of 10%. (1) Although rates are no higher than 0.1% in most parts of the United States, certain Yupik Eskimo villages in Southwestern Alaska have been shown to have carrier rates in excess of 20%. (2)

High prevalence of the hepatitis B virus (HBV) carrier state is considered to be a significant public health problem because of serious sequellae such as chronic active hepatitis, hepatic cirrhosis, glomerulonephritis, and vasculitis, and because it predisposes to the development of primary hepatocellular carcinoma, which has been postulated to be one of the most prevalent malignancies in developing countries. (3) An increased incidence of primary hepatocellular carcinoma, similar to that in hyperendemic areas of Asia and Africa, has been noted in the Eskimo villages where the HBV carrier rates are high. (4)

Knowledge of the time at which an infant becomes infected with the hepatitis B virus and the mechanism through which that infection occurs is of utmost importance if programs to prevent development of the carrier state in young children are to be successful.

Beasley et al. (5) have pointed out that in Taiwan approximately 40-50% of Chinese HBV carriers are the result of perinatal transmission, and furthermore that the persistance of the carrier state is longest when the HBV infection is acquired at an early age. Therefore prevention of the HBV infection of infants is necessary if the HBV carrier rates are to be reduced. Emphasis heretofore in Alaska, as in many developing countries, has been focused on the detection of antigen positivity in prenatal women in the hope of preventing infection of the infant by administration of HBIG and subsequent active immunization. Recent recommendations of the Academy of Pediatrics Committee on Infectious Disease include testing a high risk pregnant woman's serum for HBsAg, but not for either core or surface antibody. If the HBV infection of infants in Alaska is usually acquired during the birth process, this screening for antigen only would be adequate to identify infants at risk of HBV infection who would benefit from immunization. On the other hand, if Alaskan children are being infected frequently in the postnatal period by persons other than their natural mothers, additional measures would be necessary in order to identify infants at risk.

The possibility of widespread active immunization of infants at risk became a reality in 1981 with the licensing of Heptavax in the United States, and in March 1983, the Alaska Native Health Service entered into a one-year Memorandum of Agreement with the State of Alaska Division of Public Health designed to conduct the serological screening of 20,000 Alaskan Natives in designated high risk Southwestern Alaska villages with subsequent immunization of those individuals showing no serological evidence of past or present

HBV infection. This comprehensive serosurvey has provided the opportunity to study the serological status of maternal-infant pairs and make some observations regarding the source, the timing, and the mechanisms of infection in young children who have serological evidence of hepatitis B infection.

METHODS

Mothers of 337 infants between six months and four years of age in 21 Alaska villages were interviewed by the author during the process of drawing blood for the serosurvey. Nineteen of the villages were primarily Yupik Eskimo and the other two were Athabaskan Indian, bordering on the Eskimo region. The interview questions were designed to:

1. Verify the parentage of the child and the composition of the household of residence;
2. Gain information regarding frequent care givers other than the natural mother;
3. Gain information about infant feeding practices.

Sera collected from both mother and child were tested at the State of Alaska Northern Regional Laboratory for antibody to hepatitis B core antigen (anti-HBc) by the EIA technique (6). Sera positive for anti-HBc, the marker of HBV infection, were then tested by EIA for anti-HBs, the indicator of recovery and immunity, and for HBsAg, the indicator of current infection. Sera positive for HBsAg were further tested for HBeAg which correlates with infectivity, and for antibody to HBeAg. Serological findings of the children were subsequently matched with those of their natural mothers in order to ascertain whether the antigen positive children had antigen positive natural mothers from whom they could have acquired HBV infection during the perinatal period.

RESULTS

Serological Status of Infants

Since 21 of the 337 infants in this study were positive for HBsAg, the overall rate of surface antigen positivity in this group was 6.2%, with considerable variation (0 - 22%) from village to village. Either antigen or antibody markers of hepatitis B infection were present in 16% of these children, however in seven infants under one year of age the HBV antibody may have been temporary as the result of passive transfer from an immune mother. When results of the serosurvey were analyzed, eight of the interview villages were characterized as high risk with over 10% antigen positivity, nine as moderate risk with 3 - 10% of residents antigen positive, and the remaining four as low risk with less than 3% showing a positive result for HBsAg. Of the 53 study children with markers of past or present HBV infection, 35 were from the high risk villages.

Table I
Serological Status of Child Related to Mother's HBV Status

	(HBV Serological Status of Child)						
HBV Status of Mother	HBsAg & HBeAg	HBsAg & HbeAb	HBsAb & HBcAb	HBcAb only	HBsAb only	No Marks	Total
HBeAg+	1*					1*	2*
HBsAg+ No e Marks			1				1
HBsAg+ & HBeAb	3**		3	1		13	20
HBsAb & HBcAb	15***	1	5	7	1	72	101
HBcAb only				1		7	8
HBsAb only	1					2	3
No Markers			5	1		171	177
Immunized			2			8	10
Total	20	1	16	10	1	274	322

*Post natal maternal infection (same mother)
**Same mother
***Seven mothers immune before birth of child

Note: Child is the unit of analysis. Forty-nine mothers had more than one child included in the data.

Serological Status of Mothers

Table 1 shows the HBV serological status of the infants from whom serum was obtained as it relates to the serological status of their natural mothers. Only one of the natural mothers was found to be positive for HBeAg at the time of the survey. This mother, from a low prevalence village, had had a documented acute HBV infection when her youngest child was 15 months old and breast feeding. That child became HBeAg positive, but an older child remained free of all HBV markers. The mother's serum, redrawn six months later, showed prompt clearing of th HBsAg and development of anti—HBs. The status of the HBsAg positive mother who showed neither HBeAg or anti—HBe, was discovered by prenatal screening and her infant was successfully treated with HBIG and Heptavax.

Twenty of the study children had HBsAg positive natural mothers who had developed anti-HBe by the time of the survey. Since we have no prior serological data on the one mother with three HBeAg positive children under the age of four, it is not possible to determine whether she was HBeAg positive when the children were born. This mother may have been the source of infection for all three children, however it is also possible that the young siblings may have infected each other. Four additional children of these anti-HBe mothers showed serological evidence of having had an HBV infection of acquired markers as a result of passive transfer. Thirteen infants of antigen positive mothers showed no evidence of past or present HBV infection.

Of the mothers interviewed, 101 showed both anti—HBc and anti—HBs, indicating naturally acquired immunity. Fifteen of their infants were HBsAg positive, thirteen with HBeAg. In seven instances the mother's immune status had been documented prior to the birth of the study child. Fourteen additional infants showed evidence of HBV antibody, which in five children under one year of age may have been the result of passive transfer.

No serological evidence of HBV infection was found in 177 mothers, but six of their children were found to have antibody indicating infection from a source other than the natural mother. Ten additional mothers had received prior immunization during vaccine trials and the presence of antibody in the serum of two of their children must have been from a non-maternal source.

Antigen Positive Family Members

As described in the previous section, four of the antigen positive children had antigen positive natural mothers, three being siblings and the fourth the result of intimate contact with a mother infected postnatally. The remaining antigen positive infants all had mothers who were immune at the time of the serosurvey. In ten of these 17 cases, the serological survey identified antigen positive siblings living in the same household as the infected child. Antigen positive fathers were identified in five instances, grandmothers four times, cousins three times and the adoptive family once.

Table II
Typical High Risk Family

Family Member	Birthdate	HBV Status	Comments
Father	02-04-51	HBsAb & HBcAb	
Mother	01-01-52	HBsAb & HBcAb	Acute HBV 1975; HBsAb 2-17-81
Sister	01-29-76	HBsAg/HBeAg+	
Brother	04-30-77	HBsAg/HBeAg+	
Sister	08-14-78	HBsALq/HBeAq^{s}	
Brother	10-25-79	HBsAq/HBeAq^{s}	
Study boy	04-18-81	HBsAg/HBeAg+	
Study girl	02-21-83	No Markers	

Table 2 is an example of a high risk family from which it is possible to make some conjectures regarding the source and spread of the HBV infection of this and other families. The mother in this family had a documented case of acute hepatitis B at or near the time of the birth of her oldest child, but she had converted to the immune status with loss of HBsAg and development of anti—HBs prior to the birth of the fifth child. The source of the hepatitis B infection for this child, and possibly some of the others as well, was probably the older siblings rather than the mother. The youngest child still showed no markers of HBV infection at the time of the serosurvey.

Table III
HBV Markers in Child Related to Antigen Positive in Family

Family Status	Serological Status of Child		Totals
	No HBV Markers	HBV Markers	
HBsAg+ Member	41	45	86
No HBsAg+ Member	243	8	251
Totals	284	53	337

Chi Square = 117.26 p◄ 0.00001

Table 3 shows the relation between HBV markers, either HBsAg or antibodies, in the child and the presence of HBsAg positive individuals in the immediate household at the time of the serosurvey.

The presence of a positive test for anti-HBc in a mother may be an important clue to a household with members who are carriers at risk of infecting a young infant. Of the 45 children with markers of past or present HBV infection and antigen positive household members, 38 had mothers with a positive test for anti—HBc. In this study 132 of the children had mothers who showed anti—HBc. As shown in Table 4, 56 (42%) of these children lived in households where family members other than the mother were shown by the serosurvery to be HBsAg positive. Since all village residents were not present to be surveyed, there may be HBsAg positive persons in some of the other households as well.

Table IV
Presence of Antigen Positivity in Family Related to Mother's Serological Status

Family Status	Mother's Serological Status		Totals
	HBcAb+	No Markers	
HBsAg+ Member	56	16	72
No HBsAg+	76	174	250
Totals	132	190	322

Chi Square = 52.28 p ◄ 0.000001

Table V
Age of Child Related to HBV Serological Status

Age of Child (months)	HBV Serological Status Of Child						Totals
	HBsAg & HBeAg	HBsAg & HBeAb	HBcAb	HBsAb	HBcAb & HBsAb	None	
6-12			6	2	1	47	56
13-18	3				2	49	54
19-24	2		1		3	48	54
25-30	4		2	1	2	37	46
31-36	3				3	44	50
37-42	2		1	1	4	25	33
43-48	4	1	2		4	33	44
Totals	18	1	12	4	19	283	337

Age of Infected Children

Table 5 shows the analysis of the HBV serological status of the study children according to their age in months. None of the 56 infants under 12 months of age were noted to be antigen positive and all of the HBV markers present could be explained as the result of passive transfer from an immune mother or by HBIG administration at birth.

DISCUSSION

When designing an immunization program that will be effective in preventing acquisition of hepatitis B viral infection by young children who are likely to develop the persistant carrier state, it is essential to assess the time at which the infection occurs and the possible mechanisms by which spread occurs.

As shown in Table 5, the infants under a year of age in this study did not show the evidence of HBV infection that might have been expected from transmission during the birth process. Beasley et al. in Taiwan have further implicated mothers as the principal source of infection during later infancy in children protected initially with HBIG (7). Documentation of the immune status of mothers prior to the birth of seven of the infected children in this study eliminates them as the source of the postnatal infection and points to other family members, particularly young siblings, as likely sources of infection.

Prenatal screening which tests the pregnant women for HBsAg only and not for antibody is designed to detect the risk of perinatal infection. If perinatal transmission from mother to infant during the birth process is the primary mechanism through which infants are acquiring HBV infection, this type of prenatal screening may be adequate. However, in families like the one presented in Table 2, prenatal screening of the mother for HBsAg would not have revealed the risk to her infant. On the other hand, screening with anti—HBc in addition to HBsAg could have alerted health care providers to a family in which there was the possibility of postnatal infection by horizontal transmission from infectious siblings. When it became evident through the serosurvey that babies like this were being born into hyperendemic Southwestern Alaska villages, the decision was made to immunize all newborns in that area as soon as feasible.

Several published studies have emphasized that the risk to the infant depends upon whether the mother's blood is positive for HBAg as well as HBsAg. For example, Shiraki et al. (8) in Tokyo noted that 80% of 14 infants born to HBeAg positive mothers became persistant HBV carriers within four months of birth, whereas none of the 31 infants of mothers with anti—HBe became carriers. Rosendahl et al. (9) in Berlin found that no infants born to 60 anti—HBe mothers became carriers although three showed transient antigenemia.

In contrast to areas of the Orient where up to 50% of HBsAg positive women of child-bearing age are stated to be positive for HBeAg, only 13% of the female carriers between the ages of 15 and 45 were HBeAg positive in the Southwestern Alaska serosurvey. Most of those who were HBeAg positive were either teenagers or had documentation of a recent acute HBV infection. On the other hand, 66% of the Yupik Eskimo children under the age of five who were antigen positive were also positive for HBeAg, which is the most readily available indicator of infectivity. The young children who are positive for HBeAg are a more likely reservoir of HBV infection than are adult women carriers, most of whom have already developed anti—HBe.

The mechanisms by which HBV infection is spread within a household are still unclear. A recent study implicating shared chewing gum as a means of intrafamilial spread (10) has suggested the possibility that transmission may occur through the premastication of food. Beasley et al. have mentioned that spread may occur through the Oriental practice of premastication, but have cautioned against generalization to other cultures (7). Prechewing of food for infants is widely practiced in all of the Yupik Eskimo villages with 80% of the mothers interviewed indicating that they frequently chew food for their babies. The feeding of infants, furthermore, is shared with female members of the extended family. Premastication usually is started at about six months of age and continued until the child has sufficient teeth to chew its own dried fish. Since premastication is a nearly universal practice in this ethnic group, we were unable to identify a control group through which to analyze the relation of premastication to the spread of HBV infection.

Possible mechanisms for horizontal transmission from child to child include shared toys that are mouthed and chewed, shared tooth brushes, nosebleeds, cuts, and impetiginous lesions (11). The Yupik Eskimo children frequently live in small crowded houses with large extended families where numerous opportunities for horizontal transmission exist. Once the hepatitis B infection is introduced into this type of living situation, horizontal transmission is likely. The crucial difference between high and low risk villages may simply be whether the virus has been introduced and had the opportunity to spread. Low prevalence villages may well become high prevalence villages once the infection is introduced unless control measures such as active immunization of susceptibles are introduced.

IMPLICATIONS

The results of this study, coupled with the other cited observations from the Southwestern Alaska serosurvey, point to some serious concerns about the current guidelines for prenatal screening. Screening of their mothers for only HBsAg failed to identify the

risk of infection in 17 of the 21 antigen positive infants in this study. On the other hand initial screening with HBcAb, as is being done for the Alaska serosurvey, would have provided a clue that there was a source of HBV infection in the family and that the infant would benefit from early active immunization.

Two alterations in protocol are providing for more comprehensive identification and protection of infants at risk in Alaska:

1. In hyperendemic areas such as Southwestern Alaska routine early active immunization of all infants regardless of the serological status of their mothers is providing good protection from postnatal infection regardless of its source;
2. In other areas, such as urban Alaska, where the overall prevalence of HBV infection is not as great, the screening of prenatal women for anti-HBc in addition to HBsAg is now available to alert health care providers to households in which carriers might reside.

In urban centers in the United States, prenatal screening that includes HBcAb, particularly in high risk groups such as Asians, intravenous drug users, and health care providers, would be helpful in the identification of families with HBV carriers and of infants at risk who would benefit from active immunization. Tong et al. have recognized the presence of intrafamilial spread of hepatitis B infection in Asian families in the western United States (12).

SUMMARY

In summary the following conclusions are presented:

1. Perinatal transmission of HBV infection from mothers to infants is not the primary mechanism in the development of the carrier state in Alaska Eskimo infants as is stated to be the case in Taiwan where an estimated 40% of carriers are attributed to perinatal transmission;
2. Young infants probably acquire HBV infection frequently from other family members, especially young HBeAg positive siblings;
3. Prenatal screening for HBsAg only will not identify infants at risk when the mother-to-be has already developed immunity and no longer shows a positive test for HBsAg;
4. Prenatal screening that includes determination of anti-HBc can provide a valuable clue to the identification of families with carriers and therefore point out infants who would benefit from early active immunization with Heptavax;
5. The practice of premastication of food for infants is a cultural norm in the Eskimo villages of Southwestern Alaska, providing a possible means of spreading the HBV infection once it is introduced into an extended family;
6. Early horizontal transmission is an important factor in the spread of HBV infection among infants and young children in Southwestern Alaska and widespread early immunization of Alaskan Yupik Eskimo infants is justified in order to prevent development of the HBV carrier state in young children and thereby control the spread of HBV infection in Southwestern Alaska.

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Glossary

HBV = Hepatitis B Virus

HBsAg = Hepatitis B Surface Antigen

anti-HBs
Or = Antibody to Hepatitis B surface Antigen
HBsAb

anti-HBc
or = Antibody to Hepatitis B Core Antigen
HBcAb

HBeAg = Hepatitis B e antigen

anti-HBe
or = Antibody to Hepatitis B e antigen
HBeAb

EIA = Enzyme—immunoassay

HBIG = Hepatitis B Immune Globulin

Marker = Any positive hepatitis B antigen or antibody test

Before prescribing, see complete prescribing information in SK&F CO. literature or *PDR*. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity Theoretically, a patient transferred from the single entities of Dyrenium (triamterene, SK&F CO.) and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function.

Thiazides may add to or potentiate the action of other antihypertensive drugs.

Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

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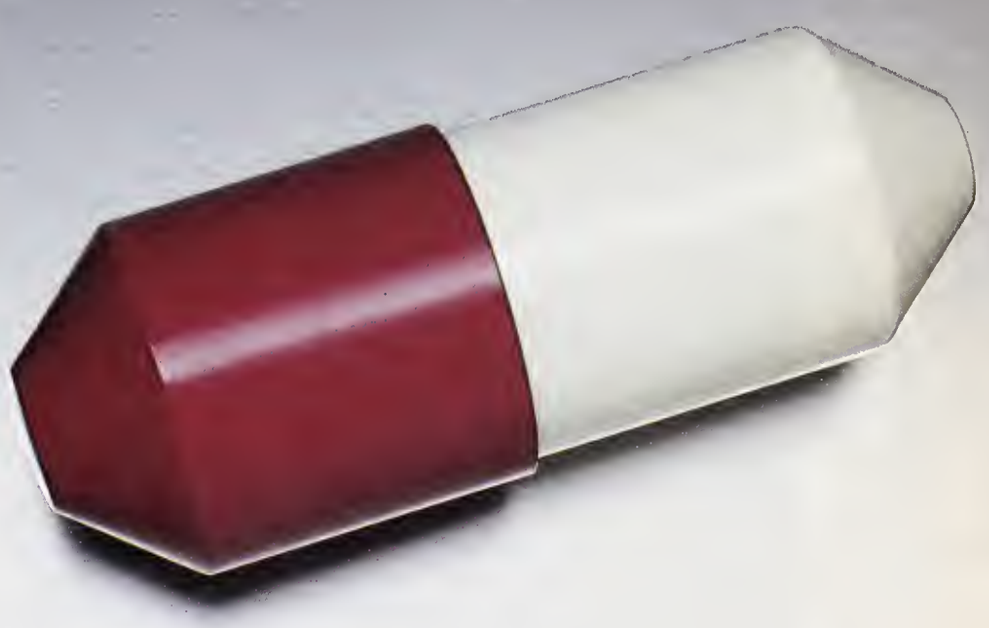

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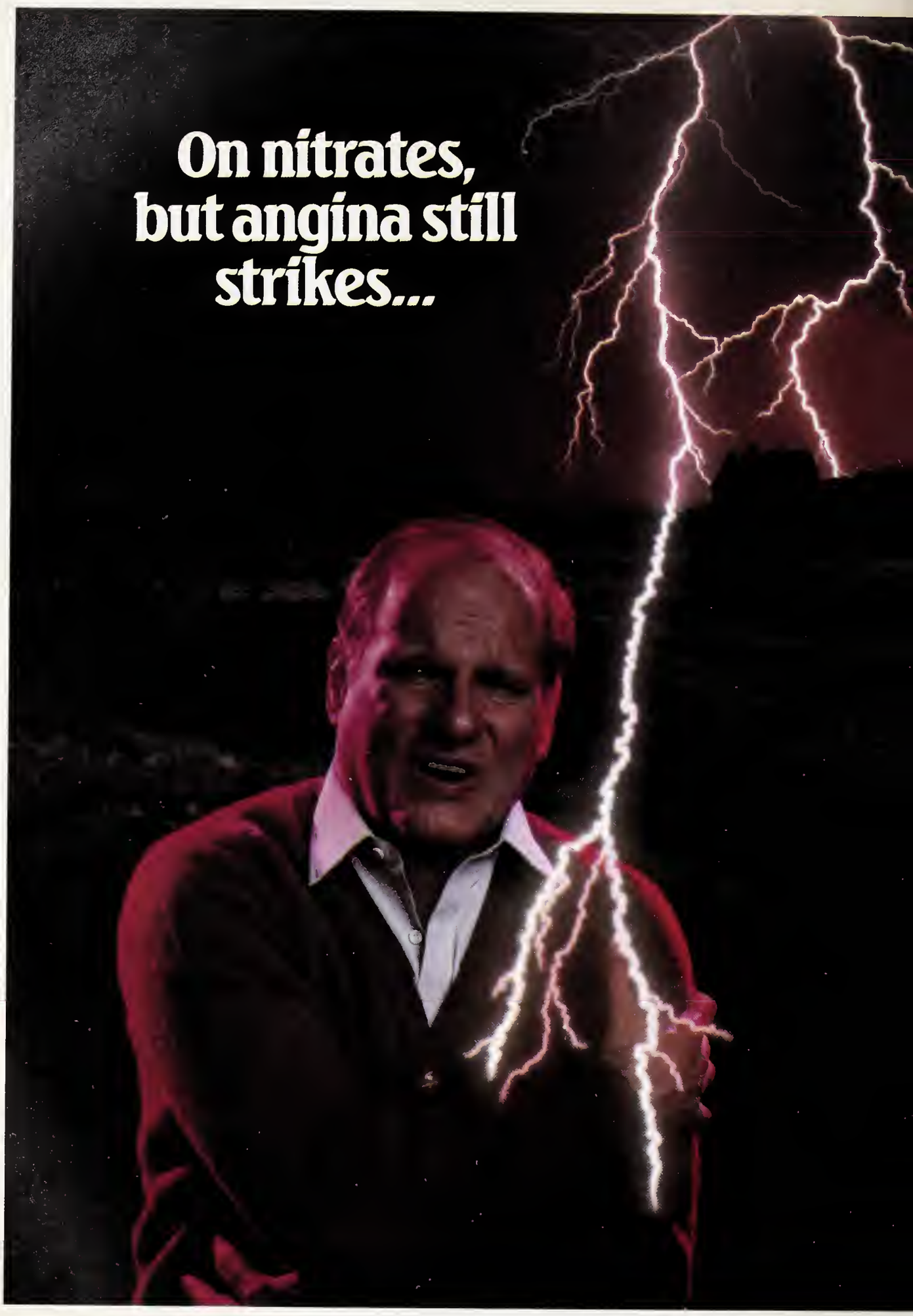
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Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment; however, four cases of hepatocellular injury by verapamil have been proven by rechallenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g. W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's effect on AV conduction and the SA node, 1° AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1° or progressive 2° or 3° AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (IHSS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2° AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. **Precautions:** ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category C*: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. (See *Warnings.*) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, macules, spotty menstruation. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984. 2385

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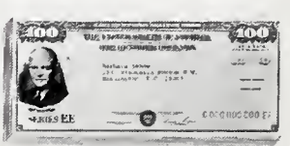

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PREHOSPITAL CARE AND THE PHYSICIAN INTERVENER

John E. Hall M.D.

Prehospital care begins the moment someone comes upon a trauma victim or a patient suffering a medical emergency. That someone may render some form of first aid and/or activate the EMS system. Depending on where the event is located in this vast state, help will arrive in the form of a paramedic staffed advanced life support ambulance, an EMT I with minimal equipment or some other type of first response team appropriate to the setting. As physicians with the desire and means to travel throughout Alaska it is not unlikely that you will at one time or another arrive on the scene of some accident or medical emergency where EMT's have begun to render emergency care to the victim. One of the most difficult and sensitive areas to define within EMS is the relationship between the physician and EMT's at the scene. There are varying levels of emergency medical care sophistication among both physicians and EMT's. Many physicians do not routinely deal with acute and/or severe medical emergencies. They may not be familiar with the principles of prehospital care and thus may not be the best person to "be in charge" in the prehospital setting. At the same time it would be absolutely wrong to discourage the qualified "good samaritan" physician from stopping at the scene, clearly identifying him/herself and offering assistance. Certainly the qualified physician's more extensive background and experience will benefit the patient and should be welcomed by the EMT (1). The interaction which takes place between physician intervener and the EMT at an emergency scene should be one of mutual respect and cooperation seeking to answer the question "What is best for this patient's care?, not "Who's in charge here?" For this cooperative interaction to take place it is necessary for physicians to have a good understanding of two things:

1. What is our own level of expertise when it comes to prehospital care?

   We each need to answer that question so that as we approach an emergency to give assistance we are well aware of our skills or lack of skills when it comes to immobilizing the spine, setting up traction splints, establishing airways, extrication, intubation, using mast pants, running a cardiac code according to ACLS standards, etc.

2. What are EMT's trained to do?

   In the state of Alaska there are four levels of prehospital providers who are certified under Alaska statutes. An EMT-I is trained to be proficient in Basic Cardiac Life Support, elementary patient assessment skills, the use of basic diagnostic equipment, extrication, splinting, spinal immobilization, the recognition of shock and treatment with MAST, the use of oxygen, oral glucose and syrup of ipecac, emergency childbirth procedures, control of hemorrhage and the use of airway adjuncts such as suctioning equipment and oropharyngeal airways. In addition the EMT-I has a basic knowledge of gross and topographic anatomy, medico-legal issues, vehicular response procedures, handling the emotionally disturbed patient, recording and reporting patient information and triage.

   An EMT-II has the same training as an EMT I and has practiced at that level for at least 6 months. In addition the EMT-II has completed

a minimum of 50 extra hours of training heavily weighted towards an understanding of the physiology or the shock state and the development of additional assessment skills. The EMT-II is trained in skills which include esophageal intubation, initiation of peripheral IV lines and administration of crystalloid solutions, application of rotating tourniquets and the use of $NaHCO_3$, $D_{50}W$ and naloxone.

An EMT-III has all the training and experience of an EMT-II and has a minumum of 24 extra hours of training. The EMT-III is trained in skills which include the application of electrodes and monitoring of cardiac activity, recognition of sinus rhythm, v-tach, v-fib and asystole, defibrillation of life threatening dysrhythmias, use of lidocaine, administration of morphine for pain secondary to extremity trauma and recognition of the indications for and administration of epinephrine 1:1000 for anaphylaxis.

Paramedics licensed in Alaska have completed a training program generally far in excess of the Alaska EMT-III requirements. The individual has passed the National Registry EMT-Paramedic exam and has completed a field internship approved by the State Medical board. Paramedics are trained in all the skills of the EMT-I, II and III as well as in the performance of ACLS, administration of additional medications and the performance of additional emergency procedures authorized by their supervising physician.

It should also be noted that EMT-II's, III's and Paramedic's in Alaska are each sponsored by a physician who accepts direct responsibility for the care that they render.

With an understanding of our own skills and those of EMT's it should be possible for patients to receive the best prehospital care available at each emergency scene. In some states there have been examples of confrontational interactions between physician intreveners and EMT's. These type of confrontations besides leaving both the physician and EMT's open to criticism and possible liability, never serve the best interest of the patient. Because of these cases and because we often function smoother with some guidelines, I have recommended that the state adopt the American College of Emergency Physician's position statement on the Control of Advanced Life Support at the scene of Medical Emergencies (2).

General Principles

Control of a medical emergency scene should be the responsibility of the individual in attendance who is most appropriately trained and knowledgeable in providing prehospital emergency stabilization and transport. When an advanced life support (ALS) squad, under medical direction, (1) is requested and dispatched to the scene of an emergency, a doctor/patient relationship has been established between the patient and the physician providing medical direction. The paramedic (also EMT-II, III) is responsible for the management of the patient and acts as the agent of the medical director unless the patient's physician is present (as would occur in a doctor's office).

If an intervener physician is present and on-line medical direction does not exist:

A paramedic (EMT) on an emergency scene should relinquish responsibility for patient management when the intervener physician has identified himself and has demonstrated his willingness to assume responsibility and document his intervention in a manner acceptable to local emergency medical services system (EMSS). When these conditions exist, the paramedic should defer to the wishes of the physician on the scene. If the treatment at the emergency scene differs from that outlined in a local protocol, the physician should agree in advance to accompany the patient to the hospital. However, in the event of a mass casualty incident or disaster, patient care needs may require the intervener physician to remain at the scene.

If an intervener physician is present and on-line medical direction does exist:

The on-line physician is ultimately responsible. If there is any disagreement between the intervener physician and the on-line physician, the EMT should take orders from the on-line physician and place the intervener physician in radio contact with the on-line physician. The on-line physician has the option of managing the case entirely, working with the intervener physician, or allowing him/her to assume responsibility. In the event that the intervener physician assumes responsibility, all orders to the EMT's should be repeated over the radio for purposes of recording. The intervener physician should document his intervention in a manner acceptable to the local EMSS. The decision of the intervener physician to accompany the patient to the hospital should be made in consultation with the on-line physician.

1. Medical direction of a prehospital provider exists when a physician or physician advisory board, as described in the College's position statement on medical control, is identifiable as being directly responsible for the actions of the EMT.
2. On-line medical direction exists when EMS personnel are in direct communication with a designated physician, as described in the College's position statement on medical control, who assumes responsibility and gives direction

for patient management.
3. Intervener physician is a licensed physician (who has not established a prior physician/patient relationship) wishing to take charge of a medical emergency scene, and who is willing to provide evidence of licensure.

It makes sense for physicians to be actively involved in all levels of patient care. That is our tradition, it is our training and it is our desire. Prehospital care may be the most important care a patient receives. As physicians it is important that we become aware of our skills and those of EMT's so that working together we can make prehospital care the very best possible for all of our patients.

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Comments To The Editor

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A PROPOSAL FOR THE DEFENSE OF THE AMERICAN MEDICAL PROFESSION

Sanford A. Marcus, M.D.*

Start by answering two questions. Doctor, do you regard yourself as being better or worse off—measured both by your professional and socio-economic security—than you were five years ago? Next, what changes in the direction of those trends over the next five years do you honestly expect will take place, given no dramatic alterations in the standard responses made by organized medicine to what is certainly the greatest set of challenges that have ever been hurled at the American medical profession?

This is neither the time nor the forum to look for what went wrong or to choose a scapegoat. It is my considered opinion that nothing went wrong at all; that we are simply the victims of our own successes in building the finest system of health care in the world.

It was only pursuant to this success that venture-capitalist types perceived that there were fortunes to be made from the marketing of medical care; so all this cant about there being a "health care cost crisis" is simply a contrived pretext to enable them to accomplish this. After all, the spending of 10% of the Gross National Product on health care (most of this on hospitalization, housing, and warehousing of the infirm), at the same time that we are spending 16.3% of that same GNP on recreation and leisure in this country, scarcely constitutes a "crisis" by any reasonable criteria!

Couple this with a simultaneous desire on the part of politicians to weasel out of their promises to provide access to decent health care for the poor and the elderly, in order to enable them more conveniently to allocate greater than half of our national budget to the payment for wars, past and future, and you have all the synopsis you need to figure out the plot.

As a necessary prelude to this corporate takeover by the so-called Medical-Industrial Complex of what essentially has been a cottage industry that has always operated on a piecework basis, it has become necessary for this newly-emerging managerial class to capture control of the medical profession; for while doctors themselves take home less than a nickel of each health care dollar, after subtracting overhead and taxes, at least until now they have had a strong influence in determining how the rest of those dollars were spent.

The ability to seize that control over doctors was not easily accomplished, given the esteem in which our profession has been held by the American public in past years. For that reason it has been deemed necessary that the attack should be leveled against the very esteem itself, through an organized campaign of "doctor-bashing"—doctors have been proclaimed to be too rich, uncaring, negligent, incompetent, unavailable, venal, lecherous, interested only in money, don't make house calls, commit malpractice, perform unnecessary surgery, and themselves constitute the greatest obstacles to decent patient care—et cetera ad nauseam.

Ignoring the fact that this social transformation is not simply a spontaneous revolution, as has been claimed, but rather represents an expression of someone else's envy of our status and their greed for the profits we can generate for them, it ill-befits anyone who represents himself to be a medical leader to agree even to the **existence** of a "health care cost crisis" by taking part in seminars on cost-

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cutting. By his very presence in such a forum he has become entrapped in a situation analgous to being obliged to answer the classic question asked by devious lawyers, "When did you stop beating your wife?"

Given the fact that Wall Street is presently seething with multi-billion dollar plans to capture our health care delivery system, as doctors who are the ultimate agents who must deliver that care we are compelled to take a long, hard look at the nature of the responses we have been making recently in behalf of our generally decent and dedicated profession. First of all, with such giant stakes being wagered in this all-out effort to accomplish this unfriendly corporate takeover, it only succeeds in making us look pathetic when we still try to clamber back up onto our crumbling pedestals, wrap ourselves in those same old tattered priestly robes, and by virtue and moral sausion alone to repel all those financial Visigoths.

Neither can we hope to outbid them in a lobbying contest for the favor of legislators. With the fourth largest corporate merger in U.S. history having just been consummated between two of these medical marketing behemoths, it is not realistic to expect that doctors who constitute only 0.3% of the country's population can accumulate anywhere near the matching stakes that would enable them to continue playing in such a high-powered game.

Lawsuits against the clearly monopolistic abuses of these corporate enterprises, usually the first suggestion to be offered by physicians unschooled in such matters, are similarly doomed to failure. They usually end up dragging interminably through the courts, improverishing their initiators, and enriching only the two sets of contending attorneys.

The refusal of the U.S. Supreme Court to hear the case of the physicians of Massachusetts against the oppressive Blue Shield organization in that state, suggests that the court system itself is less concerned with fair play than with the facilitation of whatever seems to be the prevailing socioeconomic trend of the moment. Even without the intervention of the Supreme Court, however, the Governor of Massachusetts had indicated prior to their decision not to intervene, that he intended to bypass the judicial system entirely by granting Blue Sheild a special exclusion from the need to comply with the anti-trust laws, thus enabling them to continue unopposed their practice of reducing that state's doctors to indentured servitude.

The clincher in the assessment of where we stand as a profession, can be gleaned from the proposal before that same Massachusetts legislature to withdraw entirely the right to practice medicine of any doctor who does not agree to treat Medicaid patients, regardless of whatever conditions might be imposed on doing so!

The last shred of hope to which we physicians tend to cling is that the vaunted loyalties of our individual patients, based on our long history of dedicated service to them, will somehow regain for us some of the respect for the autonomy and status we once held. It must now be proclaimed sadly that this Emperor has no clothes either; that they are really no longer **our** patients at all. They now "belong", body and soul, to the various prepaid health plans to whom they long ago yielded total responsibility for paying their health care bills. The fact that authority must inexorably follow responsibility, and that those plans will now be the **sole** determinors of the care they receive, removes them in all but nostalgia from the need for showing any concern for us as "their"doctors.

Speaking bluntly, the purpose of all the foregoing is to impress American physicians with the shocking truth of their own total loss of power to influence either their professional or their socioeconomic lives. As a group that has not been obliged to deal in marketplace considerations or in the commodities of power that are traded there, we find ourselves confused, embarrassed, and patheticallly rusty or even totally untrained to be able to muster the skills necessary to enable us to cope effectively in such an unfamiliar environment.

One fact is self-evident: that given the power and determination of the forces that are assailing us, the implements and bases of strength on which we relied during all those wonderful years when we really didn't **need** a defense organization at all, are no longer able to serve us effectively. It is a source of great regret that when I first suggested to the leaders of the American Medical Association in 1971 that they convert the AMA into the American Doctors' Union, it was regarded as a piece of impudence, totally unworthy of consideration by the AMA.

"The AMA is not, and cannot be, a Union!", was the editorialized party-line at that time. That position was based on the anti-trust laws as interpreted only by the AMA's attorneys, on the ethical considerations involved, on the unthinkability of doctors striking, and ultimately on how such a preposterous suggestion could dare be made to tarnish such a proud professional image as ours.

Having dutifully accorded our own peer organization the courtesy of the prior right to consider such a proposal and having been duly rebuffed, we proceed to form our own trade union for doctors, the Union of American Physicians and Dentists. Our own successes and the course of American medical history since we first made the decision to do so, has reinforced our conviction that **only** such an organization can mobilize the remaining sources of professional power that are needed to defend ourselves, and to protect our patients from any lowering of the quality of care they receive.

It is a cause of great sadness to us that during these intervening years, the AMA has chosen to

regard us as upstarts and interlopers who seek to replace them, and repeatedly to accuse us of divisiveness. For our part we have actively encouraged our Union membership to continue support of the AMA and its local divisions, recognizing, as we must, that to do less **would** clearly be divisive, and that the AMA has a pivotal role to play in the real politik of American medicine as it is unfolding. More about that role later.

As to that accusation of "divisiveness", we believe fervently in the principle that "All Doctors Must Remain Under One Umbrella!", and we regard ourselves as being no more divisive in relation to the AMA than is the specialty of neurosurgery, for example, in relation to primary care practitioners. The need for the specialized type of negotiation required under the rigid guidelines of the labor laws simply cannot be tacked on to an already "Jack-of-all-Trades" AMA, without doing a disservice to the effectiveness of those tasks it does perform competently. Not only is such specialization **not** divisive; but it frees our profession from the legal bonds that render collective negotiating by the AMA **as it is presently constituted,** to be highly illegal!

We are realists enough to recognize that American doctors have enough adversaries outside the profession **not** to be creating them from among our own colleagues. At the same time it must be agreed that there is more than one road to salvation, and that the course followed by the older, larger, and better known group that purports to speak for American medicine—the AMA—has not been effective either in arresting or even in significantly slowing the downward course in the fortunes of our profession. Our original proposal to them **was** not and **is** not that the AMA be replaced by the Union, but that it adapt itself to the reality of today's assaults against us by restricting its activities to doing the job it has always done better than anyone else.

Every doctor owes a tremendous debt to the AMA for its role in establishing, supporting, and defending the highest standards of medical care that have been attained anywhere in the world. Because of this alone until recently most of us have enjoyed what must fairly be called the Golden Age of American Medicine. **This is the exclusive function that the AMA must continue to perform; not only in the establishing of the highest standards of care but in proclaiming that such care must not be denied to anyone, on the basis of age, inability to pay, or on any criteria other than medical necessity!**

The AMA, then, should be the Supreme Court of Medicine, totally unyielding and uncompromising in the defense of its standards. With the assumption of that role, it should forthwith withdraw from all its other conflicting interests that have brought it into embarrassingly close relationships with the hospital and health insurance industries and with government, and which have become increasingly inappropriate activities for an organization that collects dues for the representation of its members-doctors, at the same time that all these other entities are asserting their right to subjugate our profession.

The AMA is correct in asserting that it cannot be a union **in its present form,** for to engage in socio-economic activities in addition to its other functions would put it on a collision course with the anti-trust laws, as it has learned repeatedly and painfully. Under United States law, associations constituted primarily for professional purposes are clearly prohibited from venturing into the area of collective negotiation on economic issues; and especially so when some of their leaders not infrequently hold management positions in insurance companies, HMOs, PPOs, Foundations for Medical Care, and schools of medicine.

This is not true in most other countries, Great Britain and the Scandinavian countries among them; so it is perfectly permissible for the British Medical Association, for example, to be a registered Trade Union with Her Majesty's government, while continuing to perform the professional, scientific, and educational tasks it has always done so well.

On the other hand, trade unions in the U.S. **must** restrict their activities to the socio-economic representation of their members, and all dues that are collected ultimately are spent on that function alone. What is not widely known is that a registered union **must** represent its members to the best of its ability, and that "failure to represent" is not only a cardinal offense for a union, but can constitute grounds for decertification or even subsequent tort action by the wronged member. A professional association, on the other hand, has no such obligation.

A major stumbling block in our attempt to persuade the AMA to the merits of unionism for doctors, is the repeated opinion they have received from the AMA attorneys that "self-employed" or "independently contracting" physicians cannot legally engage in collective bargaining. At this point we must take issue, not with that opinion alone—for it is only an opinion—but with the way the AMA chooses its attorneys.

Remember, for most of the 137 years that the AMA has been in existence it **was** true that doctors were entrepreneurs and small businessmen. Doctors have always prided themselves on being "my own boss", and this led inexorably to their assuming attitudes that were appropriate more to management than to workers. This was reinforced in recent years when they became able to incorporate their practices, and it is generally apparent that doctors have sought their social niches and relationships from among that same managerial class with which they identified themselves so

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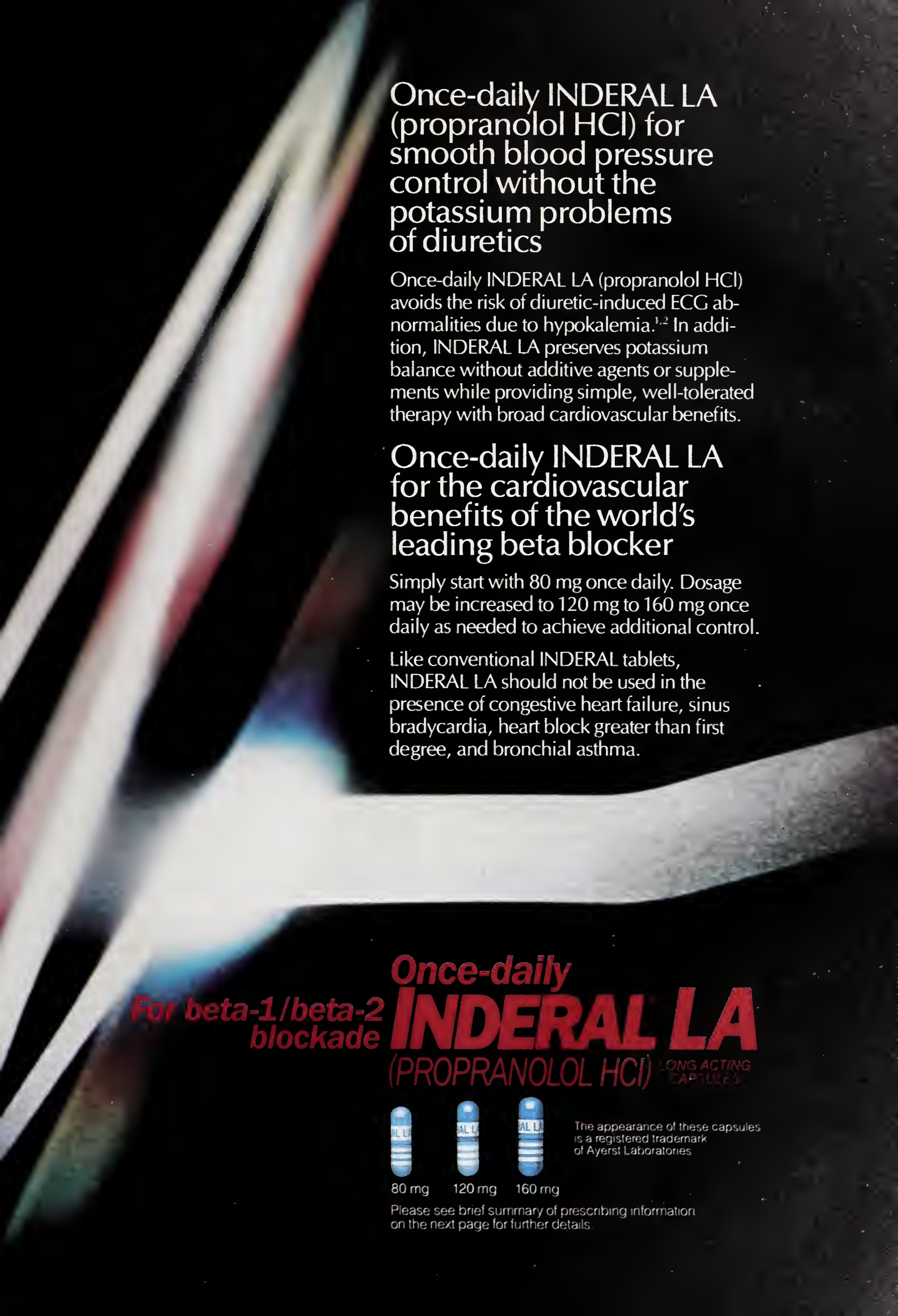

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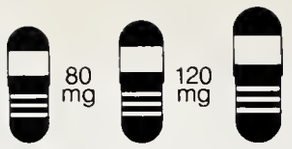

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*
INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**
DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.
CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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closely. It is understandable, then, that they should also select the attorneys who advise them, only from among firms with strong management orientation.

It is unfortunate but true that physicians as a group tend to view the law with abject reverence, as though it was etched in granite. Attorneys, on the other hand, know that the law is a constantly-changing organism, adapting itself to changing social mores and pressures. For virtually every law there can be advanced two widely-divergent opinions.

For that reason, while we respect the professionalism of the AMA attorneys who issued their White Paper on unionism, it must be pointed out that theirs is clearly a management-oriented viewpoint which chooses only those interpretations that are hostile to any contrary view. Using many of the same case citations, our own attorneys have reached almost diametrically-opposite findings simply because they have chosen those interpretations that have been successful in the courts in working to the advantage of employees, as opposed to that of their employers.

We can cite ad infinitum such examples as professional baseball and football players, journeymen barbers, musicians, motion picture actors and directors, owner-operators of teamster trucks, and a host of others; none of whom are any more "salaried" workers than we are, but who have been granted the legal right to form unions of their own, to engage in true collective bargaining on economic issues and, most important, to enjoy the applicable exclusions from the anti-trust laws that are uniquely granted to bona-fide trade unions but which are withheld from professional associations. It is amusing but true that the motion picture producers, hardly an economically downtrodden or impoverished group, have now formed a trade union of their own, under the Teamsters, of all things!

Certainly the degree of control over every aspect of our professional lives that is being asserted by our own new paymasters is, if anything, greater than that exerted over most of the groups listed above. Ultimately it is the power to hire and fire that establishes the role of the employer, and this potential of being able to be hired and fired is growing dangerously close for us doctors. With over 2000 British physicians presently on the welfare roles, it should no longer be shocking to any of us that the prospect of unemployment for considerable numbers of American physicians is a very real one as well.

It is our proposal that American doctors must look for their future representation to **two** specialized and separate agencies, supporting both with their dues and reaping the benefits of membership in two quite different ways. The AMA, as stated above, must be the standard-setting entity, never compromising with the lowering of the highest standards of care that have evolved in this country. Remember, there will be a constant effort on the part of the new management that will control us to cheapen and lower the denominator of that care. The AMA, then must serve only as the defender of our professionalism, defined as being our right to be the best doctors we can be, limited **only** by our consciences and our expertise.

It is the Union that must handle those economic issues that are strictly off-limits to the AMA as presently constituted, although our union has also established ample legal precedent that the issues of quality-of-care are indeed proper subjects for inclusion in the negotiating agenda. In so doing, the Union works constantly to protect our rights to be the best doctors we can be, in the unhindered exercise of our professional judgements.

Of necessity, the two organizations must remain completely separate, without any interlocking directorates or pooling of funds. This is essential in order that there can be no "piercing of the veil" of anti-trust protection, based on a possible contention that our separation would be merely a sham to enable us to evade the law. Membership in both organizations, however, would appear to be of great advantage to all doctors, for it would give them, in effect, the best of both worlds; a strong and legally effective socio-economic arm, and a professional association that had become totally effective and believable, simply from having divested itself of those former activities that had clearly become conflicts of interest.

It is further suggested that the AMA henceforth be a professional organization that is run only **by** and **for** doctors of medicine; as opposed to having its policies determined by lay executives. No longer must the AMA consider itself to be merely a fraternal organization—or worse, a "Good Ol' Boy" network that often provides its retiring leaders with cushy jobs with insurance companies or hospitals, thus enabling them to assert a managerial role over their former colleagues.

Present reality decrees that the AMA can no longer continue the practice of annual rotation of its officers, leaving only lay employees to hold firmly the keys of continuity, and the consequent ease of being able to cross that forbidden line into the setting of policy. Doctors should be the only persons who set AMA policy.

It is a necessary corollary that medical leaders of both the AMA and the Union should **not** be selected only from among those who have become so independent financially that they can afford the luxury of absenting themselves from their practices to engage in medical organizational activities. Such security breeds smugness and possibly even a drift toward management viewpoints. The doctor-leaders of both the AMA and the Union should be paid for their services to the profession, so that there can be proper representation from among the young, women, and minority groups who will pro-

vide many of the physicians of the future, and who should have a strong early input into the determination of what that future will be like.

As America drifts away from a manufacturing economy toward one oriented to the provision of services, the character of its organized labor force is also changing drastically. While a fall in the numerical strength of Organized Labor has been widely advertised, this is primarily in those blue-collar jobs. Meanwhile, the so-called white-collar unions have been prospering, and I can report to you that our Union of American Physicians and Dentists is presently being wooed actively by no less than six such major union groups.

With unemployment becoming a real consideration for the future of some American doctors, it is not unlikely that desperation may force some of them to affiliate themselves with such unlikely groups as Auto Workers, Building Service Employees, School Teachers, Government Employees, Office Workers, and unspecialized unions representing all types of Hospital and Health Care Workers; in which the unique needs and concerns of doctors would be totally submerged among huge groups of unrelated workers who readily can outvote them in such a "wall-to-wall" union.

While we feel a real sense of solidarity with the legitimate needs of all other members of the labor force for fair treatment, such an inappropriate intermixture of the personalized doctor-patient relationship with that broad range of general needs would certainly be counter-productive.

For that reason the AMA should give active consideration **at this moment** to our proposal that it encourage the continued growth of an autonomous union comprised **only** of doctors, the alternative being the ultimate bleeding-away of AMA strength to broadly-based and medically-unrelated trade unions, simply because the growing desperation of American doctors might compel them to believe that they could gain thereby a degree of socio-economic clout that has not been forthcoming from the AMA to-date.

What are, or should be, the interests of the various parties concerned? From the standpoint of the doctors of the United States the sole concern must be that they must be represented most effectively in both these major areas of their concern, by what are decreed by established principles of good management to be this separation and specialization of function.

The Union is adamant in stating that we do not regard it as being inappropriate that a medical organization must establish as its **primary** concern the effective representation of the members who support it with their dues. The casual drift into relationships with the hospital industry, through the Joint Commission on Accreditation of Hospitals, for example, must be terminated forthwith, as the hospitals have made no secret of their hope to survive economically by tapping into the earning potential of their doctors through various overt and thinly-veiled contracting or joint-venture proposals that are actually employment arrangements.

Similarly, while long ago it might have been deemed proper for the medical profession to involve itself in the administration of the health insurance industry—Blue Shield once proudly advertised itself as "The Doctors' Own Plan"—the present hostile posture of Blue Shield and most other vendors of health insurance in dealing with physicians makes it unthinkable that a physician could any longer occupy a directorate in such an organization; much less to participate in organizational conclaves with such firms, without the protection of the labor laws firmly in place for themselves and those they purport to represent. To continue such blind trust and cooperation with such an avowed adversary constitutes a "sweetheart" deal, considered in labor parlance to be a cardinal sin against the interests of one's fellow workers.

The disturbing inclination of more than a few present or past medical leaders to participate in the administration of such plans as Health Maintenance Organizaiton, Preferred Provider Organizations, Independent Practice Associations, etc. **for their own monetary gain,** must also be recognized and condemned by the profession. While it is the perogative of anyone in a free society to cross over the line that separates us from management, this constitutes a clear and total impropriety for such doctors either to exploit the positions of confidence they have been given by their fellow doctors by purporting to continue to speak for them, or even any longer to identify them being their "peers" or "colleagues".

The AMA should launch an immediate and detailed examination of its own future function, as expressed through its own Constitution and Bylaws. Much of the present verbiage should be stripped away, as it undertakes the process of converting itself into an assemblage of the outstanding medical scholars, researchers, academicians, and practitioners in the country. And, because the AMA must henceforth be the Supreme Court of Medical Quality, these doctors should be selected as much for their integrity and toughness as for their clinical or academic reputations. Their unquestioned professional standing would establish that it is they to whom all doctors can look to establish and defend the definition of what constitutes medical excellence.

What does the Union want for itself? Primarily we seek the general recognition that the devices of the past are no longer applicable in enabling us to face and overcome the degree of massive economic force that has been mustered against us, and that only the protection of the labor laws can

afford us any semblance of equality and fair treatment at the negotiating tables where we will be obliged to represent our profession.

Titles, personal acclaim, and certainly the power to control the lives of others, play no part in our motivation, and we have structured our organization, insofar as is possible, to negate such superficial trappings that seem to have assumed much importance in other organizations. We have developed a highly-skilled cadre of experienced labor organizers and labor-oriented legal staff, always with the clear prior understanding that they have the responsibility of implementing only what our all-doctor Board sets as policy, and not of setting policy themselves.

What we do covet from the AMA are some of its outstanding spokesmen and political leaders, commodities that always seem to be in short supply in an emerging organization. We believe that many of these proven leaders become "burned out" under existing conditions, simply because they have not been allowed the freedom to operate under the protection of the labor laws, and thus to be able to represent the profession effectively. The frustrations of having a clear recognition of what needs to be done, yet of being hamstrung by the legal inability of a professional association to negotiate effectively, are problems they would be far less likely to encounter as leaders in a union setting.

While we want and expect that all doctors will belong to both organizations, by law there must be no sharing of officerships or intermixing of funds between the two organizations. and, perhaps to the sadness of some, there will be no place in either group for the "Good Ol' Boy!" network that has customarily provided spokesmen for our profession, simply because of their unique quality of being able to sit patiently through interminable county and state medical society meetings on their way to higher office.

As a combat-oriented organization, we expect hard work, dedication, vigor, and determination from our leaders and, because young doctors will be obliged to cope for many more years with the profession that emerges from today's radical transformations in medical practice, we expect that many of these young doctors will step forward and volunteer for such leadership.

This concludes what constitutes our scenario for the preservation of the dignity and professionalism of doctors in the United States, one that will enable them to be the best doctors they can be for their patients, and to retain the strong motivation of pride in what they do. To do nothing—bending and acquiescing before each new thrust that is directed at us—is to assure the degradation of tomorrow's medical care, based on the substitution of corporate profits for medical dedication.

When the academic levels of the students from whom tomorrow's doctors will be drawn, falls to the level of that of today's new school teachers, based on this reduction of medicine to its lowest common denominator, the ultimate tragedy of what is happening will become apparent to all concerned. On that day we will be obliged to "re-invent the wheel", struggling to reestablish a decent quality of medical care in America; assuming we do nothing between now and then but cling passively to the status quo.

Personal aggradizement, prior territoriality, or who gets to carry the flag in the Fourth of July parade, are all trivial considerations when contemplating the magnitude of the present social transformation of American medicine. The foregoing is presented as a sincere attempt to solve a monumental series of problems, hopefully through the establishment of new mechanisms and courses of action that can only redound to the advantage of a profession of which we are all tremendously proud to be members.

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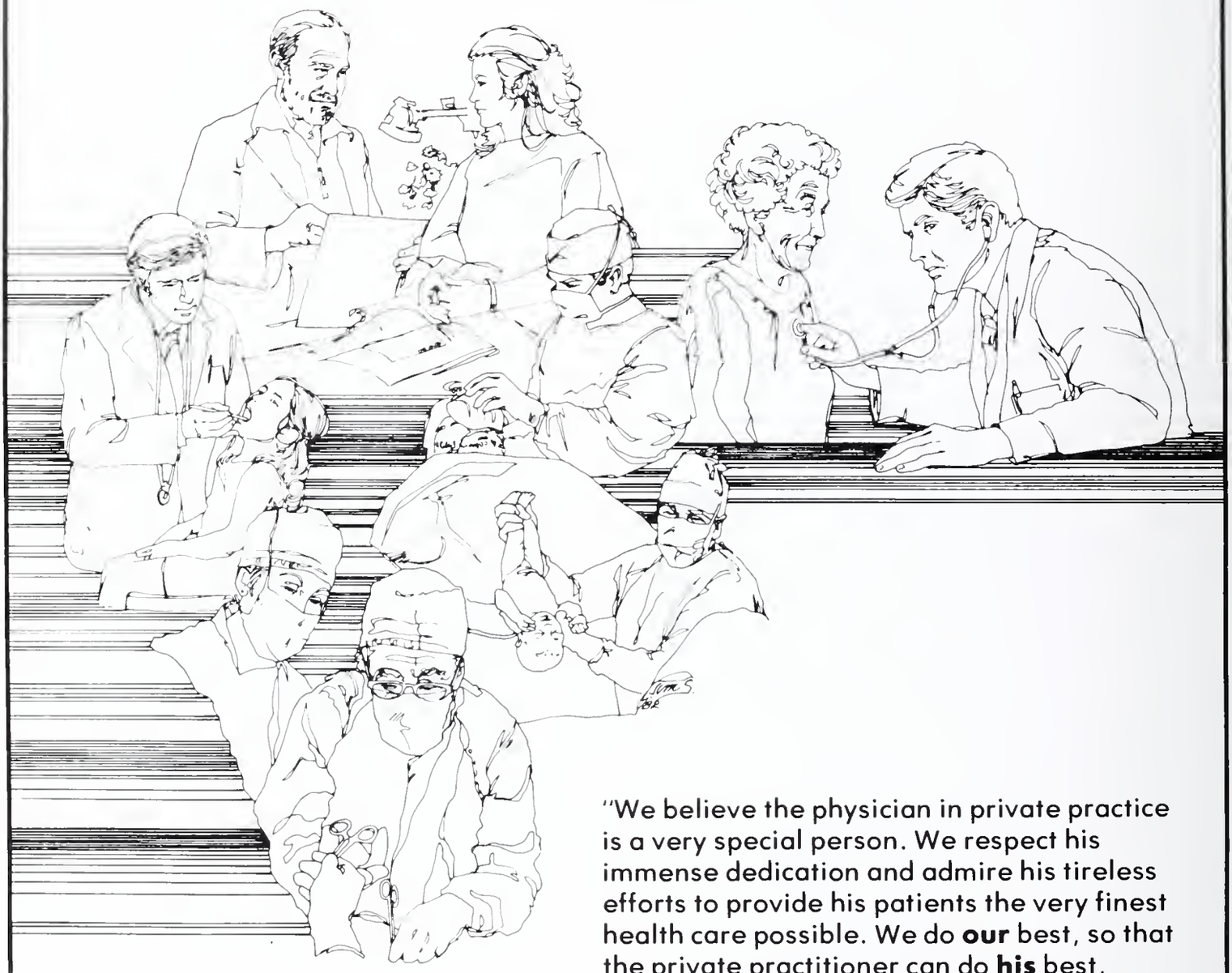

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HISTORY OF MEDICINE IN ALASKA

Dr. Francis J. Phillips arrived in Seward by boat in June 1950. He came to do chest surgery at the Seward Sanitarium. He became its Medical Director within two weeks. He was involved with the tuberculosis program in the Territory of Alaska. He is now semi-retired though active as a part-time consultant in alcoholism.

Mary Lee, his late wife, was president of both the ASMA and the Anchorage Medical Society Auxiliaries. She is remembered with fondness as a lovely, gentle woman.

* * * * * *

It is difficult for us at this time in medical history to recall the devastation tuberculosis caused in Alaska both among caucasians and the native people. It is noteworthy that TB was still a problem in Anchorage at the time Dr. Phillips arrived and that it was a scourge of major proportions among the native villages. The late Dr. Martha Wilson of the Alaska Native Medical Center once remarked that she could readily understand how natives resorted to alcohol since many were separated at an early age to be sent out to boarding school and returned to villages emptied of people because of TB. The death rate was 800 per 100,000.

The following is from a broadcast interview of Dr. Phillips who says:

"In the beginning we started out to help people to understand tuberculosis: what it was, what they could do to keep from getting it, ordinary sanitation things and better eating and living habits. The people who lived out in the villages were sitting ducks for a disease that was transmitted by contact. In a room the size of an ordinary living room you might find 50 natives and 40 dogs and no windows. That is ideal for transmitting a contagious disease.

We helped them to learn how to handle themselves and then treated them. The treatment prior to my time in Alaska had been putting people in bed and keeping them there. It is bad enough to have a chronic disease and nobody can tell you when you are going to get well, without telling them 'You will be in bed two, maybe three years!' It is a terrible blow especially for the breadwinner of the family.

There was a big emotional part of it. When possible we would talk to the family. However, often it was necessary to write a letter to the priest or somebody in the village to explain it. It helped them to understand that it wasn't such a mystery.

Now the problem of TB has been controlled but it's not eradicated. We watch it and as soon as a case starts, its under treatment. There are good treatments now. Isoniadide, discovered in the mid 50's, is a great drug. Within the last 15 years there is another one, nyambutol, which in some ways is even better. Chemists have combined the two which works the best."

For ASMA Auxiliary
Gwynneth Wilson, Editor

FRIENDS OF MEDICINE

Rarely physicians in the medical community become impaired, be it from alcohol, drugs, emotional illness or senility. ASMA through the Friends of Medicine has established means to help deal with problems of such individuals. If you know of any physician in need of assistance please call the ASMA office at 562-2662. Help rendered early in the course of many illnesses may prevent irreversible damage.

RISK MA

The Physician As Expert Witness

This is the second portion of a two-part series on the physician as witness. In the first part, the Alaska civil lawsuit procedure was briefly outlined. The summons and complaint were described, and the meandering road to trial was somewhat crudely sketched. Also discussed was the need for the physician to be aware that seemingly innocuous depositions may actually expose the doctor to a risk of considerable future harm. It is instructive to revisit that area of risk management because of its grave implications. The following case illustrates the magnitude of the potential problem:

A patient with chronic lower extremity venous insufficiency visited a surgeon by whom he had previously been seen. The patient described a work-related accident which produced a minor laceration on a lower extremity. The laceration failed to heal, and became ulcerated. After appropriate hospital care, the ulcer healed. A short while later, the surgeon stripped varicose veins from the same extremity. When the patient awoke from the surgery, he had a complaint consistent with a tibial neuropathy. A claim for worker's compensation was filed, alleging that the neurologic disability was an indirect result of the work-related injury. The surgeon's deposition was taken in the worker's compensation case. No allegation of physician misconduct had been made, and the doctor had no counsel present. Attorneys for the worker and the employer questioned the doctor. As a result of facts obtained at that deposition, the worker filed a malpractice action against the physician. The physician's testinomy in the worker's compensation case could be used against the physician in the subsequent lawsuit.

There is no easy solution to the problem raised by this case. Physician's have an obligation—some courts say a legal duty—to assist their patients in obtaining benefits such as disability payments. That obligation requires that doctors testify, when necessary, on their patients' behalf. No doctor would reasonably contemplate contacting an attorney every time he or she was called upon to give a deposition. On the other hand, the physician in the case cited above created considerable difficulties by unknowingly testifying virtually against himself.

One solution to the problem involves communication and common sense. Whenever a statement—written or oral—is requested of a physician concerning a patient, the doctor should speak with the patient. Permission to give the statement should be obtained from the patient. (This should be followed up by written authorization, if that has not previously been obtained.) The doctor should inquire into the patient's health status. Such an inquiry will give the doctor up to date information concerning his or her patient. Moreover, it will allow a doctor to compare the patient's actual physical condition to that which the physician would predict. If the actual is significantly less than the predicted, the physician is at risk for winding up on the wrong end of a malpractice suit. Similarly, a patient with chronic pain—even expected chronic pain—represents a risk to the physician.

A doctor attending a patient who has failed to progress as expected, or who has chronic pain, should carefully consider wether he or she has a potential exposure for damages claim by the patient. Did the medical services provided meet the standard of care in the community? Was informed consent obtained prior to instituting any form of therapy? If any type of therapy was declined by the patient, was suffecient information about the risks of foregoing therapy given, so the patient could rationally weigh the pro's and con's?

If answers to any of the above questions are negative, the physician should contact his or her risk manager prior to giving a deposition. The risk manager will fully discuss the case with the doctor. Often such discussions will clarify any questions, and no further action by either party will be needed. On occasion, the risk manager may recommend further review. The review process need not take much time, and may provide considerable expertise in evaluating potential liability on the physician's part.

Assuming a physician either lacks professional liability insurance, or for whatever reason chooses not to contact the risk manager in a case where the physician has concern about potential exposure, a second (but inferior) option is availabe: Prior to any deposition, the doctor should ask each attorney whether the attorney is aware of any possible calim which might later be make against the doctor as a result of the care provided the patient. It will then become necessary for any attorney contemplating an action against the doctor to speak up. Failure to warn the physician that a malpractice action may be brought, so the physician may be represented by counsel at the deposition, may be sufficient to prevent the deposition being used against the physician by the attorney who knew of a possible claim.

Assuming no issues of professional liability are suggested—which will be the case approximately 99% of the time—the doctor should next be satisfied that he or she has been authorized by the patient to release the requested information in the deposition. Again, a simple telephone call will help clarify the situation. Virtually any patient will be truly flattered to learn that the physician is sufficiently interested in the patient to spend a few minutes chatting on the phone. Besides being good marketing, it is cheap insurance: satisfied patients don't often sue their doctors. The call gives the doctor one more chance to nip dissatisfaction in the bud, as well as the opportunity to let the patient know that a deposition has been requested.

Naturally, a written consent for release of information should be received by the physician, any verbal communications with the patient not withstanding. The physician should

AGEMENT

scrutinize the authorization prior to the deposition. Federal law expressly prohibits the release of medical information recieved from other sources without the expressed, written consent of the patient. Consider the following case: The patient is a recent arrival in Alaska, and has brought medical records concerning treatment he received for a low back injury. The history of the low back pain is well documented. He is involved in a motor vehicle accident in Alaska, and sustains an additional low back injury. He is evaluated and treated by the physician, who obtains copies of the prior, relevant, medical records. The physician's deposition is requested by the insurance company representing the other dirver. A properly signed and dated authorization is given to the doctor, and allows the release of "any and all information of any kind concerning my medical condition." The physician releases information of the prior back problem. The doctor has violated the patient's right to the privacy of the earlier record.

An authorization such as that just quoted allows the doctor to release any information the doctor has generated, and probably any communciations which the doctor has received from consultants to whom the patient has been referred by the doctor. If additional information is sought, a more detailed release is necessary. Such a release should contain an additional statement to the effect that: "This shall also authorize the release of medical records received by the doctor or institution named above from other health care providers."

There are rare cases in which the physician will not receive a patient's permission to release information to others. When in doubt, the physician should probably remain silent. If a lawyer wants a physician's testimony badly enough, the lawyer will get a subpena or a court order compelling the testimony. If the opposing counsel is sufficiently convinced that the testimony is truly privileged, that attorney will struggle mightly to prevent disclosure of the information. It's usually best to allow such a conflict to swirl over the heads of medical care providers. Things will eventually get sorted out, one way or another. It is a rare case in which a physician is successfuly sued for damages for failing to discuss a patient's condition; cases are almost always lost, however, by the doctors who spoke too soon.

After permission to release information has been granted, the doctor should make every effort to insure that two goals are met: efficiency, and accuracy. The legal communication should be efficient, so that time away from patient care responsibilities is minimized. Accuray in that communication, however, is essential; even innocent transmittal of incorrect information can have dire consequences for the physician.

To insure efficiency, before any deposition or court proceeding, the physician-expert should meet with the attorney who seeks the physician's testimony. The doctor should have several clear objectives when meeting with the lawyer: The doctor should learn who is claiming what, since cases often involve claims, counter-claims and corss-claims. When appropriate, the doctor should seek to determine whether there is medical history (pre-or-past) of which the physician is unaware. The doctor should specifically inquire of the lawyer as to exactly what the lawyer seeks to learn. With this basic fund of background information, the physician can usually draw a reasonable conclusion as to what the various parties will seek.

After obtaining the information suggested above, the doctor should reconsider his or her assessment of the patient's case. Often there will be information provided at such a meeting which previously had been unavailable. The doctor should candidly compare new and old databases, and should consider the implications which any differences might suggest. Not only is this good patient care, it is important from a risk-management prespective, as well.

Physicians must act resonably at all times. If a doctor owes a duty of reasonable care to another, and breaches that duty, the doctor will be guilty of professional negligence. It is an error to assume that the doctor's duty extends only as far as the patient. A psychiatrist in a large midwestern city learned this lesson the hard way. He certified numerous air traffic controllers as being medically disabled as a result of stress-related disabilities. The providers of the disability benefits sued, claiming the doctor negligently diagnosed the disabilities. The psychiatrist asserted that he owed no duty of care to those organizations—only to his patients. "Wrong", ruled the court. The psychiatrist knew, or resonably should have known, that others would rely upon his determinations. For that reason, he had to use reasonable care to insure that the information he was passing along to the organizations was accurate. Since he failed to do so, he was liable for damages. The moral: If somebody is willing to pay an attorney to listen to what a doctor has to say, the doctor should assume that somebody will be relying upon the doctor's opinions. The doctor should take pains to insure that the testiomony is accurate.

Lee S. Glass, M.D., J.D. — has addressed numerous groups on risk management including the international College of Surgeons and the Department of Orthopedics, University of Washington School of Medicine. Glass practices law with Faulkner, Banfield, Doogan & Holmes in Anchorage and Seattle. He is also obtaining postgraduate medical training at the University of Washington.

PRESIDENT'S PAGE

At the Fall Council meeting in Mt. McKinley two very important items were on the agenda. The first was the issue of malpractice insurance and its attendant and related problems of TORT Reform; second is the issue of health care financing and its attendant indentities of HMO's and IPA's. These two subjects merit your considered attention. In action taken at the Council meeting, an assessment of $200 per member was approved by the Council for the purpose of assisting our fellow citizens in obtaining meaningful TORT Reform. The state medical society has been quite active in the formation of a coalition for Tort Reform. To that end, we participated in the insurance colloquium sponsored by the defense bar of the State of Alaska and the Division of Insurance and the Commissioner John George of the State of Alaska. From this colloquium several important considerations emerged. The first is that the problem with insurance is no longer confined to the medical professions. Architects, engineers, day care center operators, retail merchants and the liquor industry are among those individuals who are severely and adversely affected by rising insurance premiums. At the insurance colloquium many of the issues responsible for the insurance problems were discussed. Unanimity of option however, was that there is a definite need for Tort Reform or Tort modification. To that end, the medical society has collated, with the assistance of other medical societies, most of the legislation which has been proposed or passed in other states relative to the medical malpractice issues. Upon further reflection it appears that many of these proposals have broad applicability if correctly stated in law.

There is, I believe, a unique opportunity in the State of Alaska to obtain meaningful Tort Reform or modifications that it is exceedingly important that this not be viewed as special interest legislation. To that end we are committed to participating with the Citizens Coalition for Tort Reform.

There are multiplicity of specific Tort proposals which can be made. Without exhaustively detailing each of these in this brief presentation I would like to inform all of you that the Ad Hoc Committee for Tort Reform will be very active over the next year. We hope to pre-file legislation under sponsorship of the Citizens Coalition for Tort Reform and to actively pursue its passage in Juneau. I should caution all of you that that's only the beginning. Once the legislation is passed it will surely be challenged by the trial lawyers and others. This will no doubt require a lengthy set of appeals which will certainly include the Alaska Supreme Court and may well include the United States Supreme Court. One need only think of the expense involved in such appeals to realize that our $200 assessment is certainly not overly generous. We would appreciate your support in this endeavor. Any of you who have further questions or wish to become more actively involved may join the Ad Hoc Committee for Tort Reform. You need only contact me to be appointed and to learn more about this problem which faces us and our community.

The second issue facing the Council this year was that of the financing of medical care. To that end Dr. Bob Burnett from Santa Clara, CA was our guest speaker. Dr. Burnett has extensive experience in physician operated HMO's/IPA's and is certainly among the most knowledgeable individuals in the country regarding these programs. He borrowed an old quotation "he who has the gold makes the rules" to illustrate his principals. The point of this quotation is that increasingly competitive measures within the health care market place will dictate that those who pay the bills will determine the manners, methods and modalities of the delivery of health care.

In Anchorage both hospitals have been active in the pursuit of PPO's which to many would appear to be but the first step in the formation of an HMO. To those who live in areas other than Anchorage this may not appear to be an immediate problem. However, for many in Anchorage it would appear that if physicians are not active in this particular phase of the delivery of health care we may very well find ourselves in a position where we are the employees of the hospital or other organizations which control the distribution of health care dollars. An IPA/HMO Committee has been formed and is under the chairmanship of Dr. Bill Doolittle of Fairbanks. Dr. Doolittle has extensive experience in the formation of HMO's and IPA's and has graciously consented, after some coercion on my part, to chair this committee. At the outset our intention is to gather information, to become informed, to become articulate regarding the issues and be in a position to respond should it appear that it is necessary. Again, I would urge any of you who have an interest in knowing more about IPA's and HMO's to contact Dr. Doolittle and volunteer to serve on this committee.

We are certainly underexperienced and underfinanced when it comes to understanding and reacting to the changes in health care financing mechanisms. To begin with we shall have to rely upon ourselves for hours of volunteer activities in order to become educated and informed on these

issues. I suspect that it may be required that some time in the future we shall have to take appropriate action which may involve some degree of risk financially to us as physicians. I urge your support of these committees both from the point of view of volunteer effort and financial support. Once again, if there are any questions regarding these activities, please don't hesitate to call the Medical Society office. We would welcome the opportunity to discuss them with you.

David A. McGurie
President, ASMA

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ALASKA SURGERY CENTER ANNOUNCES SCHOLARSHIP FUND DONATION

The Alaska Medical Scholarship Fund received a $77,613.85 donation last week from the Alaska Surgery Center (background). Pictured in front of the Center, which is located at 4001 Laurel St., are Dr. Leon H. Chandler (left) and Larry Smith, an Anchorage pharmacist. Chandler is the Center's medical director and Smith is president of the scholarship fund. The donation was made by the Surgery Center's parent company, Alternacare Corp. of Los Angeles.

Recipents of 1985 $2,500.00 scholarships from the fund are Susan Heverling of Anchorage and Jerry "Joe" Pinkerton, Jr., of Wasilla.

Herverling, who received an undergraduate degree in biology from the University of Southern California, is a second year medical student at Tulane University. She is the daughter of Charles and Cora Sue Heverling of Anchorage and a graduate of West High School. She received an identical scholarship from the Surgery Center last year.

Pinkerton, who was graduated from Dimond High School, received his undergraduate degree in life and behavioral sciences in June from California Baptist College in Riverside. A first-year medical student at Oral Roberts University School of Medicine, he is the son of the Rev. Jerry and Connie Pinkerton of Wasilla.

The scholarship fund was organized in 1984 in memory of three founders of the original Alaska Surgery Center which was located in Geneva Woods—Drs. Jeff Severson, Smoky Stover and Herb Bias. Last year the Center moved to its new quarters on Laurel St. and this year, the corporation was purchased by Alternacare.

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Medical Auxiliary Launches Holiday Greeting Card Projects

A statewide effort to raise funds for AMA—ERF, the American Medical Association Education and Research Foundation, has been successfully undertaken through the introduction of a Holiday Greeting Card project.

Physicians and their families throughout the state receive a "holiday greeting" from their colleagues whose names appear on the enclosure card. To have names included, the physicians and /or spouse make a tax deductible contribution to AMA—ERF through the state chairman, Kathie Wood (Mrs. Tom).

The 1985 Holiday Greeting Card was designed by Fairbanks artist and Auxilian, Marcia Brown (Mrs. George).

AMA—ERF is an ongoing project to provide funds to medical schools. The program was established in 1950 at a time that medical schools were operating with a deficit of $10 million a year. This fund was a private sector effort to minimize the need for federal assistance to medical education.

The goal that first year was to raise $1 million. Although the total collection of $640,000 did not meet the challenge, it did represent more than half the amount donated to medical schools by the American Medical Education Fund and the National Fund for Medical Education of which Herbert Hoover was chairman.

The AMA continued to contribute $500,000 each year until 1985 when budget cuts forced the gift to be reduced to $100,000. At this point the AMA Auxiliary was called on for assistance. Since that time, AMA—ERF has averaged gifts over $1 million yearly.

In 1984, 11.7 million was contributed to AMA—ERF from the medical community. Current statistics from the Annual Report on Medical Education in the United States shows:

— government funding to medical schools decreased in 1984

— financial assistance to medical students declined by 6%, the first decrease since 1954.

— scholarships decreased 8% and loan funds decreased 4%.

— the average educational debt reported by senior students was $23,914, an increase of 19%.

— more than 13% of the graduating class of 1983 reported debts of $30,000 or more.

AMA—ERF currently has several different funds:

Medical School Excellence Fund, providing grants to medical schools to use as they see fit. This is the oldest of the funds, and the largest ($1,642,697 in 1985).

Unrestricted Fund, used at the discretion of the Board of Directors to support pilot and experimental health and medical programs.

Categorical Fund, designated for specific research areas.

Medical Student Assistance Fund, the newest AMA—ERF fund, begun in 1983, providing funds for medical schools to use in direct financial assistance to students. ($468,740.54 in 1984)

From modest beginnings in 1950, AMA—ERF has consistently supported quality medical education in the U.S. The Alaska Medical Society Auxiliary is pleased to be recognized as being a significant part of this extraordinary fundraising effort. We salute the generosity of the medical family in Alaska in this visible sign of support for medicine's continuing commitment to excellence.

ORGAN DONOR AWARENESS WEEK

The major health project for the medical auxiliary this year will be an effort to increase public awareness of the need for organ donation.

Nationwide there are between 20,000 and 30,000 potential donors each year, but the utilization rate is only 2,000. Grieving family members are rarely approached about donations at the time of tragedy, therefore it is a decision that should be made in advance, at an unemotional time in a person's life.

Early in 1986, an Organ Donor Awareness Week will be observed in the state. This will be a time for a media campaign; a reception for organ donor recipients at which time they will have the opportunity to say something about the difference it has made in their life; brochures around town explaining the process; and easy methods to obtain organ donor cards.

During the later weeks of October, 1984, two separate tragic deaths occured: One, the 26 year old actor, John Erik Hexum; the other, an 8 year old girl killed in an automobile accident. In both instances the families, though grief-striken, gave permission for organ donation.

The education of the public about the need for donors and the opportunity to give the ultimate gift is a project worthy of our time and energy.

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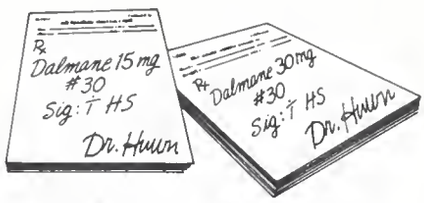

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ALASKA MEDICINE, Vol. 27, 1985
SUBJECT INDEX

Adopted Resolutions of ASMA, Haines, Alaska, 1985 76
Alaska Medicine Essay:
- If It's War - Who is the Enemy? 72
- Medicine - in Trouble 10
- A Proposal for the Defense of the American Medical Profession 101
- Uninsured Doctors 36

Alaska Medicine Vol. 26, 1984 Author Index 52
Alaska Medicine Vol. 26, 1984 Subject Index 51
AMA Delegate Report 42
Annual Meeting of the Alaska State Medical Society, Haines, Alaska 3
ATLS: What is it? 88
Auxiliary News 16, 49, 83, 110

Chemical Disclosure Legal Developments Affecting Alaska 67

Estimates of Cancer Incidence in Alaska Natives Due to the Exposure of Global Radioactive Fallout from Atmospheric Nuclear Weapons Testing 53

History of Medicine in Alaska 12, 74, 107

The Impacts of Alternative Funding Policies for Ambulatory Care Services On Hospitalization in the Indian Health Service Contract Health Care Program in Cordova, Alaska 31
Infant Apnea Syndromes Part II 64

Kawasaki Disease in an Alaskan Eskimo Child 28

Letter to the Editor 13, 47

Malignant Hyperthermia 1

Periampullary Disease and Pancreatoduodenectomy 19
Post Graduate Courses 46, 85
Postnatal Intrafamelial Spread of: Hepatitis B Infection in Alaskan Eskimo Infants 92
Prehospital Care and the Physician Intervener 98
President's Page 75, 108

Radiation and Cancer in Alaskan Natives: Part 2 86
Recurrent Ameloblastoma: Case Report 4

Uvulopalatopharyngoplasty, (UPPP), An Effective Surgical Treatment For cases of Snoring and Some Cases of Sleep Apnea 90

What's New in Neurosurgery in the 1980's 7

ALASKA MEDICINE, Vol. 27, 1985
AUTHOR INDEX

Beal, David D., M.D. . . . 4, 90
Beck, Carl, M.D. . . . 4
Brelsford, Gregg . . . 31

Chiles, Donald G. D.D.S. . . . 3
Crouch, Carolyn . . . 83, 110

Faust, David K., M.D. . . . 1
Fritz, Milo H., M.D. . . . 10, 47

Hall, John E., M.D. . . . 98
Harrison Jr., Harry, M.D. . . . 64
Heidersdorf, Sidney A. . . . 13
Horning, Lorrie . . . 16, 49, 83, 110

Kosatsky, Thomas, M.D. . . . 28

Lanier, Anne P., M.D. . . . 53, 86
Lehman, Richard M., M.D. . . . 7
Longenbaugh, George, M.D. . . . 88

McGuire, David A. . . . 3, 72, 75, 108
Marcus, Sanford A . . . 101

Nelson, Donna M., M.N. . . . 53

Penrod, James N., Esq . . . 36

Smith, Douglas G., M.D. . . . 36
Snyder, John, M.D. . . . 19
Stutzman, Charles D., M.D. . . . 53, 86

Templin, David W., M.D. . . . 88
Toomey, Kathleen E., M.D. . . . 28
Tower, Elizabeth A., M.D. . . . 92

Uzych, Leo, M.D. . . . 67

Williams, Jennifer, P.H.N. . . . 86
Wilson, Gwynneth . . . 74, 107
Witt, Richard, M.D. . . . 42
Wolf, Sandra Lee . . . 12